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The Non-Surgical Treatment of Comitant Strabismus

HERMANN M. BURIAN, M.D., IOWA CITY, IOWA

THE rational management of any condition presupposes a knowledge of the causes and of the physio-pathology underlying that condition. In the case of comitant strabismus we are very much in the dark about both cause and physio-pathology, but certain things are known.

We know that in comitant strabismus there is a misalignment of the visual axes of the eyes. And we know that this misalignment is accompanied by well defined signs and symptoms. Outstanding among these are the prevalence of certain types of refractive errors in definite types of strabismus, reduced visual acuity in one eye, poor or absent binocular co-operation owing to suppression or anomalous retinal correspondence, and abnormalities in the motility of the eyes.

I am not proposing to discuss in this paper the etiology of comitant strabismus and I leave the question wide open to what extent these various signs and symptoms are cause or consequence of the strabismus. Everyone is entitled to his own views in this complicated field. But it is of practical significance that we be acquainted with these signs and symptoms and it is necessary for us to realize that there are both innervational and non-innervational factors involved in almost every case of strabismus.

It is most important that we be aware of this, for we must always keep in mind that surgical treatment can effect a change only in mechanical conditions: a change in the position of the eyeballs, and a change in the effectiveness of the ocular muscles. Innervational factors are influenced by surgery only indirectly, insofar as a change in the relative position of the eyes may secondarily produce a change in the binocular co-operation. But surgery is the only means by which a permanent change is the relative position of the eyes can be achieved.

Non-surgical treatment, on the other hand, can only indirectly affect the relative position of the eyes, by altering the impulses reaching the extra-ocular muscles. This change is, however, not necessarily permanent. Thus a child may have perfectly straight eyes while wearing glasses, but not without the glasses and while exerting accommodation. Or, a patient with exotropia may have been taught by orthoptic training to keep his eyes straight, but as soon as he relaxes the compensatory convergence impulse, his exotropia may again be manifest.

From the Department of Ophthalmology, College of Medicine, State University of Iowa, Iowa City, Iowa

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Innervational and mechanical factors are not present in the same proportion in all cases of strabismus. One must determine to what extent innervational and non-innervational factors are the responsible agents in each particular case. This is one of the reasons why non-surgical treatment should always precede surgery in every case of squint.

Before entering upon the discussion of the non-surgical treatment of strabismus, I wish to answer one general question. When should the treatment of the child with strabismus be started? The answer to this question can be only one: as soon as the strabismus is discovered. The ophthalmologist may not have the opportunity to see the child at that moment. Parents are not always very observing; they often prefer to delude themselves into thinking that such a thing could not happen to their child. Often they also only too willingly listen to well-meaning relatives and friends who advise them to wait before taking the child to a doctor, since the child will doubtless outgrow the squint. Unfortunately, there still are pediatricians who offer the same advice, coupled with the remark that the ophthalmologists cannot do anything for the child at an early age and that it is wiser to wait until the child grows older and more co-operative. Here there is a wide field for ophthalmologists to spread enlightenment. No child is too young to have his strabismus treated in one way or another. To be sure, not all forms of treatment are appropriate for children of all ages, but some form of treatment can be instituted with beneficial result at any age.

TREATMENT BY GLASSES

It has been recognized for a long time that the first important step in the diagnosis and treatment of all forms of concomitant strabismus is the determination of the refraction of the patient's eyes and the wearing of an appropriate correction. The great Dutch physiologist and ophthalmologist, Donders, established over 100 years ago the close relationship between accommodation and convergence on the one hand and uncorrected refractive errors and accommodation on the other hand and thus laid the foundation for the treatment of strabismus by glasses, more especially for the treatment of concomitant convergent strabismus by corrections for hypermetropia.

I shall not linger over the theoretical aspects of the problems but shall only discuss the practical consequences of Donder's teaching.

Every patient with any kind of concomitant strabismus must first of all be refracted and must be given appropriate glasses to wear for a certain period of time.

How should he be refracted? The method depends to some extent on the training and preference of the ophthalmologist, but there is, I believe, general agreement that in children under 10 or 12 years of age, refraction in full atropine cycloplegia is indispensable. In older children refraction in homatropine cycloplegia may be used and in adults one may employ whatever method one has found to give the best results in one's hands.

What are "appropriate" glasses? Should one prescribe for the patient the full correction found in atropine cycloplegia, thus correcting for both the latent and manifest hypermetropia, or should one make allowance for the cycloplegia? There is no unanimity on this point. Some authors are very emphatic that one should give the full atropine correction; others, I believe the majority, correct only the manifest error.

In my own experience the system which seems to have worked out best is based on the following considerations. We wish to give the patient the maximum correction which is consistent with a reasonable use of the eyes. A reasonable use of the eyes is a relative concept which differs greatly in accordance with the age of the patient. The younger the child, the more likely he is to tolerate a correction which may tend to blur his distant vision. It is obvious why this should be so. The world of a small child is restricted to a narrow compass, to the things "near at hand." Distant objects have no meaning, for one thing because of the child's relatively low visual acuity; for another, because he is not ready to "grasp" objects which are at some distance away. Every ophthalmologist of some experience knows how much more difficult it is to make a young child fixate at twenty feet than at twenty inches. But as the child grows his horizon enlarges and distance vision becomes increasingly important. By the time he goes to school he should have glasses which insure maximum vision at distance. Only thus will the child be able to work comfortably and successfully in

school. If the glasses reduce the vision, the child will soon find it out and either look over the glasses or dispense with them altogether, regardless of parents and doctors. It has always been my belief that it is preferable that the child wear a correction of, say, + 2.75 D. than to have a correction of, say, + 3.50 D. which is kept in a drawer.

Another point which I wish to make concerns the minimum amount of hypermetropic correction which should be given to a child. Some ophthalmologists think that hypermetropic corrections of from + 1.00 to + 1.50 D. cannot influence the angle of squint and that it is useless to prescribe such corrections. I disagree with this. In some cases low corrections have a remarkably great effect on the angle of deviation. This again, can be readily understood. Children with a high degree of hypermetropia have to exert so great an accommodative effort in order to see clearly that they often prefer blurred vision to the strain caused by the attempt to accommodate, whereas patients with lower degrees of hypermetropia constantly exert their accommodation and are often of the spastic or hyperkinetic type. The wearing of glasses produces, therefore, not rarely a much more dramatic effect than would seem to be commensurate with their power.

In some patients the wearing of glasses — either weak or strong — reduces the angle of squint to zero for both distance and near fixation, and such patients may spontaneously regain binocular vision. These are said to have accommodative strabismus. In others, the wearing of glasses causes no modification in the angle of squint or reduces it only partially. We then conclude that the strabismus in these patients is not, or only in part, of the accommodative type. In a number of patients the wearing of the refractive correction fully reduces the angle of squint for distance, but not for near fixation. In these patients it is advisable to test the effect on the angle of squint for near vision of an additional + 1.50, +2.00, +2.50 D. or + 3.00 D.o.u. over the distance correction. If the measurements show that this additional correction produces a significant reduction in the angle of squint at near, the patient should be given bifocals.

The prescription of bifocals makes it possible for such a child to keep his eyes straight in near vision. By having his eyes in proper alignment in the all-important near vision range, the child may keep or regain binocular co-operation. This advantage of the bifocals overshadows any disadvantage which such glasses may have. Theoretically there is no objection to them and practically speaking children generally do not react unfavorably to the wearing of bifocals. Actually, they get used to them more easily than do some adults and they will use their bifocal segment, if a large enough segment is provided. This segment can be cemented on for ready removal. Any difficulties which the child's parents may make can be overcome by pointing out to them that bifocals for children are a temporary measure comparable to some types of exercises.

While we are in general in favor of as high a correction for the refractive error as a patient will wear, there are certain exceptions to this rule. In a child with accommodative strabismus who has worn his correction for some years, one may decide to reduce the hypermetropic correction in an effort to assist the orthoptic treatment which is intended eventually to enable the child to dispense altogether with the glasses at least for distance vision. Also, in some cases of exophoria or exotropia one may decide to give the patient an over-correction for his myopia in order to stimulate his accommodation and through this to stimulate his convergence.

A type of spectacle which aims not at the correction of the accommodation-convergence relationship, but at offsetting the angle of squint are spectacles which incorporate prisms. Some ophthalmologists believe that patients can be made to wear prisms of as much as 20 or 30 prism diopters and that if prisms which just undercorrect the angle of squint are incorporated in the glasses and worn for a certain length of time, this will create favorable conditions for fusion. Theoretically the use of strong prisms at an early age should be beneficial, but to my knowledge this procedure is not used routinely.

The use of prisms after the angle of squint has been reduced by surgery is much more widespread. This is, without doubt, a useful adjunct in our therapeutic armamentarium. Vertical prisms are especially helpful. There are patients who are unable to regain binocular vision after surgery even with the use of post-operative orthoptic treatment, in whom the re-establishment of fusion and normal binocular vision is con-

siderably facilitated when vertical prisms are incorporated in the glasses.

Lastly, there is the question, how long should a patient wear his glasses before decisions are made regarding other forms of therapy, especially surgical therapy? In many patients the effect of the glasses is quite obvious from the very start. As soon as the glasses are placed in front of his eyes the angle of squint is materially reduced. However, the accommodation-convergence relationship is not immediately stabilized and one should give this relationship a chance to become fully adapted to the conditions created by the wearing of the glasses. One should, therefore, allow the patient to wear his glasses for at least one or two months before deciding about the effect of the glasses on the relative position of the patient's eyes and his binocular cooperation. This statement only relates to the ordinary spectacle corrections. Special glasses, bifocals, glasses with prisms, etc., must be worn for 3 to 6 months or longer before the therapeutic result can be fully assessed.

TREATMENT BY DRUGS

Accommodation, and through accommodation the accommodation-convergence relationship, can also be influenced by drugs. There are two ways in which this can be achieved: either by making accommodation impossible or by making it unnecessary.

To prevent accommodation some ophthalmologists choose to prescribe for their patients — especially for very young children — atropinization of both eyes for a period of months or years, making up for the patient's lack of accommodation by giving them bifocals. Good results are claimed for this method. I have no personal experience with it.

Atropinization inhibits the contraction of the ciliary muscle but does not stop the accommodative effort. Experienced opthalmologists know that incomplete atropinization may actually increase the angle of squint in estropia because of an excessive accommodative effort exerted by the patients. It has, therefore, been suggested that miotics rather than cycloplegic drugs be used in the treatment of accommodative esotropia. Such use is based on the consideration that these drugs produce an accommodative spasm by stimulating peripheral nervous structures, thus obviating the need for an accommodative impulse which in turn would give rise to overconvergence. The idea is ingenious and it can indeed be shown that children with purely accommodative esotropia are enabled to keep their eyes straight following instillation of pilocarpine or better, DFP. It remains to be seen whether the treatment with miotics can lead to a cure within a few months, and whether binocular vision gained during this period is maintained after the use of the drug has been stopped. The prolonged use of DFP leads frequently to the formation of cysts at the pupillary border of the iris, but these apparently disappear completely after the instillations are discontinued.

OCCLUSION

The proper optical correction is the firm basis for any treatment of a patient with comitant strabismus. But one must not lose sight of the fact that refractive errors alone never result in a manifest strabismus. Other factors have to contribute to produce a misalignment of the optical axes of the two eyes.

These factors are obstacles occurring in the motor or sensory part of the visual apparatus and insofar as it is possible these must be investigated and treated in every case of strabismus.

One of the major symptoms in comitant strabismus is the well-known condition of amblyopia ex anopsia in which the vision of the habitually deviated eye is reduced to a greater or lesser extent, without there being visible evidence of pathologic changes in the eye.

Regardless of one's thoughts concerning the origin of this condition, the experience of the past 25 years has clearly shown that there is an effective remedy for true amblyopia ex anopsia. The patient must be made to use his amblyopic eye, and he will regain in the course of time a good deal of acuity in that eye.

The most effective way to make the patient use his ambyopic eye is to prevent him from using his normal, fixating eye. This can best be achieved by patching that eye completely and constantly for a certain period of time. The child is then forced to use the amblyopic eye.

This would not seem to be a complicated procedure, but in the practical application of this simple method of treatment a number of questions and difficulties arise which must be discussed.

I have emphasized that occlusion should be

complete and constant. Occluding the better eye for an hour or two a day is rarely if ever of any avail. Now, occlusion is by no means as innocuous as it may appear to be. It is not only unpleasant for the child, particularly if the vision of the amblyopic eye is low. It also entails a transferring of dominance to a thoroughly non-dominant eye and this has at times far-reaching effects on the nervous system. The children may become nervous and hard to handle. On a number of occasions, I have observed that children begin to stammer whenever they are occluded or vice versa, but less frequently, that stammerers begin to talk normally when occlusion is instituted. Nevertheless, in view of the beneficial effect of occlusion on visual acuity, it is the duty of the ophthalmologist to attempt it in every case of amblyopia ex anopsia. But he must make it plain to the parents that the period of initial difficulties has to be overcome if they wish their child to regain better vision in the amblyopic eye. Unless the occlusion is carried out in accordance with the directions given by the ophthalmologist, it is a useless torture for both the child and the parents.

Eyes can be occluded in various ways. One can use an occluder which fits in one way or another to the spectacles which the child is wearing. If such an occluder is used it must be properly adjusted, particularly on the nasal side, since children have an amazing capability of peeking through small cracks between occluder and skin. A better type of occluder is one which is fastened to the skin by means of adhesive tape. Such an occluder can be easily make up of cardboard or elastoplast or else a commercial occluding patch may be employed. While the direct application of such a patch is the best assurance against peeking, it is often not possible to use this kind of occluder for a prolonged period of time, if the child has a sensitive skin. It is best to vary the difficult kinds of occluders in accordance with the needs and circumstances, alternating between occluders which attach to the glasses and occluders which fasten to the skin.

When occlusion is first prescribed, it is, in my opinion, essential that the ophthalmologist see the child within two or three weeks from the beginning of the occlusion. It is quite wrong to let a child go for a period of weeks or months without checking up on the occlusion and its effects. There are a number of reasons for this. At first the occlusion is often not carried out properly. The parents, usually the mother, have many questions which come up during the time occlusion is tried. In order to shorten the procedure it is wise to see the patients within two weeks or so after the beginning of occlusion to check up on their progress. Another, most important point is this. In my experience, if the occlusion is carried out properly, there is in the majority of cases a marked improvement during the first two or three weeks, if the eye will improve at all. It is of interest both to the ophthalmologist to find out how the child has reacted to the occlusion and of help to the morale of the patient and the parents if one can show that the visual acuity as improved by occlusion.

How long should one occlude the better eye? This cannot be stated in absolute figures, but there is general agreement that the better eye should be occluded until the vision in the amblyopic eye has been brought up to normal or at least to the level of the better eye, if this eye does not have full visual acuity. How long this process may take depends on many factors. It depends on the age of the patient, it depends on his adaptability, it depends on the thoroughness with which the occlusion has been carried out, it depends on the visual acuity which was present at the beginning of the occlusion and on other less obvious factors. As I have pointed out before, occlusion improves the acuity in most cases rather rapidly at the beginning of the treatment. Once a good beginning has been made it is relatively easy to reach a certain level, say 20/50, 20/40 or 20/30. After this the process is usually much slower. I find it as a rule much harder to improve the vision in a child from 20/30 or 20/40 to 20/20 than to bring it from 20/100 to 20/30 or 20/40.

No general rule of the thumb can be laid down as to how long an eye should be occluded. Children with a very high amblyopia do not always react to occlusion with a rapid initial improvement in visual acuity. It may take two or three months before their very poor visual acuity is improved to the point where one can see hope for further improvement. I feel, that if the vision has not improved at all after a period of two or three months, there is little likelihood that the vision will improve with continued occlusion. One has then to consider

that these eyes have pathologic changes which are not visible by the ophthalmoscope but which prevent the eye from regaining vision.

It has been suggested of recent years that in cases of very high amblyopia, especially in so-called eccentric fixation, an initial total or partial (temporal) occlusion of the amblyopic eye is helpful in breaking up undesirable habits and in assisting in establishing visual acuity in that eye. My personal experience with this form of treatment is too limited to permit me to assess its value, but reliable observers have reported good results.

Both the ophthalmologists and the parents are at times disturbed by the fact that on occasion the vision of the occluded eye decreases as the vision of the amblyopic eye improves. Together with this there usually goes a transformation of the previously unilateral strabismus into an alternating strabismus.

I am in the habit of congratulating the parents when this occurs. A rapid increase in visual acuity of the amblyopic eye, together with a slight decrease in the occluded eye, is to my mind a good sign. It indicates that the child is still pliable and that with proper handling of the case good vision in both eyes can be eventually insured. But this occurrence is an added reason why I feel that children who are treated by occlusion, should frequently be seen by the ophthalmologist or by the orthoptist to check up on their progress.

A much more serious occurrence from the standpoint of the parents is the appearance of a heterotropia, a manifest or constant strabismus, as a result of occlusion. In some children who show no strabismus or only an intermittent heterotropia, occlusion is apt to produce a constant deviation. This is a happening which we can well explain, but it is easier to explain it to ourselves than to the parents. Some ophthalmologists warn strongly against occluding in cases in which the eyes are more or less straight, for fear of producing a heterotropia in the child and unpleasantness for themselves.

I don't hold with this point of view. I believe, that it is the duty of the ophthalmologist to point out to the parent that the vision of the eye of their child can be improved. It is the first and foremost task of the ophthalmologist to do everything in his power to obtain maximum visual acuity in the eyes of his patients. But he must also warn beforehand the parents or the patient that a heterotropia may result. If he explains the situation properly to the parents, they will, as a rule, take the chance.

Occlusion may also bring out a latent nystagmus but nystagmus as such is not a contraindication to occlusion. I have seen a number of cases in which a nystagmus would disappear during the course of treatment and with the improvement of the visual acuity.

The last, and a very important question is: At what age should occlusion be started and up to what age is occlusion effective?

There really is no lower age limit. It is, of course, impossible to determine the visual acuity of infants with any degree of accuracy, but if an infant's eye is constantly deviated, this is presumptive evidence that the eye is, or will be, amblyopic. It is also obvious that occlusion is the more effective, the younger the child is. But it is difficult to patch an infant's eye. The infant may not object as much as the parents. In infants, and for that matter in any child in whom total occlusion is not feasible, one may resort to the partial occlusion afforded by atropinization of the fixating eye. Partial or total occlusion can thus be instituted at any age. But what about the upper age limit?

My views on this point are as follows. I don't believe that there really is an upper age limit at which occlusion is no longer effective. To be sure, the younger the child, the easier and quicker one can achieve an improvement in its visual acuity. But in a true amblyopia ex anopsia vision can be restored at almost any age. Numerous instances are recorded in the literature in which adults, even in their 50's and 60's regained vision in the amblyopic eye following the loss of their better eye.

The limitations of age are not so much a matter of physiology as a matter of motivation. If the motivation is present, the vision of the amblyopic eye can be improved at almost any age.

To the young child the motivation comes from the outside. He obeys — more or less willingly — and does what he is told by doctor and parents. As a child grows older, there comes a time when he will no longer accept parental orders unhesitatingly. Unless a young person wants for some specific reason to have his vi-

sion improved, it will be almost impossible to make him accept occlusion. The teen-ager is very sensitive about his appearance; he is much too busy in school and outdoors, competing with the other children scholastically and on the playing field, to bother with occlusion. Once teen-age is over and the exigencies of existence make themselves increasingly felt, there can no longer be any question of amblyopic treatment. The only motive strong enough to make an adult use the amblyopic eye is the loss of the better one and this motivation has proven to be sufficient for the restoration of reasonably good vision at any age.

It must finally be emphasized that a number of ophthalmologists of wide experience have noted that if occlusion is begun after the age of 8 or 10 years, the acuity of the amblyopic eye may indeed increase but this result is not permanent. When occlusion is stopped the vision will gradually slip back unless binocular vision is achieved. Such slipping back is, of course, not noted if the fixating eye had been lost.

TREATMENT OF AMBLYOPIA BY EXERCISES

While occlusion is a most effective form of treating amblyopia, it still is a passive method of treatment. Occlusion of the better eye in itself will not improve the visual acuity of the amblyopic eye. Only the use of the amblyopic eye will help improve its visual acuity. It is of the utmost importance not only to have the patient occlude the better eye, but to insist that he use his amblyopic eye.

This can be done in various ways. One may either, after explaining the situation clearly to the mother, ask her to let the child watch television, look a books, make little drawings, do some needle work, let the child watch moving pictures, and the like. In other words, one must ask the mother to encourage the child to use the eye. A better way is to plan exercises for the child in accordance with the age and the development of the child. The exercises should always be stimulating and arouse the interest of the child. Treatment by exercises, as opposed to treatment by occlusion, is emphasized by some authors and is carried out in consequence and on a large scale in some centers, especially the treatment of eyes with eccentric fixation. Whether the effort expended will prove to be worth while in terms of results superior to the ones obtained with the more conventional methods remains to be seen.

ORTHOPTIC TREATMENT

Occlusion is not only a most effective means of improving the visual acuity of the amblyopic eye. It is also used extensively as an orthoptic procedure to combat suppression and it is one of the most effective weapons in the treatment of abnormal correspondence.

This brings us to the important question of orthoptic treatment.

I shall not discuss the general problem of the value of orthoptic exercises in the various types of neuromuscular anomalies of the eyes or the details of the technique. We are here specifically concerned with the problem of treatment of comitant strabismus, and this discussion will be restricted to the orthoptic treatment of this type of neuromuscular anomaly.

If the goal of treatment is a functional rather than a cosmetic cure, then surgery alone will in the majority of cases not suffice to achieve it. Surgery has to be supplemented by non-surgical treatment. The essence of this non-surgical, orthoptic treatment consists in combating the sensory obstacles to binocular vision.

Patients with comitant strabismus, that is with a misalignment of their visual axes, present in addition to this deviation — which can be designated as a motor defect — a number of sensory defects such as amblyopia ex anopsia, suppression and anomalous correspondence. These defects must be removed to achieve a functional cure.

If surgical or non-surgical means or both have been successful in overcoming suppression and in restoring retinal correspondence to normal, then an attempt may be made to improve the binocular co-operation further by giving the patient that essential latitude which is afforded by fusional movements. If one succeeds in this, then the patient will frequently also attain stereopsis.

In general, then, orthoptic exercises attempt to give the patient good fixation and good vision in each eye; they are to rid him of abnormal suppression and of abnormal retinal correspondence and they are to restore fusional movements and with it normal binocular co-operation. In some patients it is possible to do this without resorting to surgery; in others surgery has

to be added. Finally, in a large number neither surgical correction of the deviation nor added orthoptic exercises will restore proper binocular co-operation to the patient.

In days past it has been taken for granted that a good cosmetic result is all that the ophthalmologist should attempt to achieve. With increasing understanding of the physiologic processes behind strabismus and with improved techniques of orthoptic training, the conviction has become more and more widespread that the purely cosmetic result is not the ideal goal of our therapeutic measures. I doubt that there is today an ophthalmoloigst who would not pay at least lip service to the tenet that the goal in the treatment of strabismus should be a functional one as well as a cosmetic one.

Nevertheless, as ever broadening experience is gathered in orthoptic treatment, many questions have arisen in the minds of the ophthalmologists with regard to the value of this difficult and costly form of therapy. Not only the effectiveness of the treatment itself is being questioned. The question is raised, is it really of such paramount importance to give a patient binocular vision to warrant the great expenditure of effort and money involved in orthoptic training? If the answer to this question is yes, in that single binocular vision is very important in today's struggle for living, then how many patients with strabismus under proper treatment will achieve single binocular vision with a good degree of stereopsis? If single binocular vision is not essential in the struggle for life, then is it essential to insure a good surgical result in the majority of cases? And if the answer to this is yes, should the treatment by exercises be given preoperatively or postoperatively or both? Should one, considering the answers to all these questions, routinely use fusion training or other orthoptic measures as part of the treatment regardless of the nature of the deviation?

These are some of the questions which are frequently asked. I believe that, if they were presented to a forum of competent ophthalmologists, very divergent answers would be received. I shall attempt to give in the following briefly my own point of view.

Orthoptic treatment is undoubtedly beneficial and has an important place in the treatment of strabismus. It is directed against sensory and innervational factors in comitant strabismus as are all other forms of non-surgical treatment. In patients in whom these factors are the prevalent cause of the strabismus, orthoptic training can in itself constitute sufficient treatment of such a patient. It is possible, for instance, by means of orthoptic training to teach a child who is hypermetropic and has a purely accommodative strabismus, to dissociate accommodation from convergence. Such a child will be enabled to keep his eyes straight without resorting to the use of glasses. If the binocular co-operation in such a child is further strengthened by fusion training, the child may be for practical purposes "cured" of his strabismus.

Such a result is, however, possible only in cases in which a certain amount of binocular co-operation existed to begin with. In the majority of patients with concomitant strabismus the binocular co-operation is at a minimum and non-innervational factors are at work which in themselves are not amenable to orthoptic treatment.

Such patients may have their eye properly aligned by surgery. This constitutes a cure of the misalingment, but it is only a cosmetic correction. The question is, should an attempt at restoration of binocular vision be made in these difficult cases?

Binocular vision is undoubtedly a desirable goal. In many occupations good binocular vision is an asset which enables the person to be better equipped to compete with his fellow workers. On the other hand, an individual that has never experienced the advantage of binocular vision is as a rule quite well adapted to his deficiency and is well able to perform tasks which require a high degree of visuo-manual co-ordination. He is without question much better off than someone who has inadequate binocular vision. This consideration must be weighed before orthoptic exercises are instituted in a patient with the intent of giving him binocular vision.

I do not wish to convey the impression that I am unduly pessimistic with regard to orthoptic exercises. I believe that they are very valuable indeed. But they should be used with discretion. Not every case which may be amenable to orthoptic treatment must also be so treated. Indiscriminate routine use of fusion training is not desirable.

Obviously, all cases should be given orthoptic

treatment in which it may reasonably be expected that exercises may influence beneficially the manifest deviation. The same holds true especially for all cases of latent deviations in which exercises may rid the patient of symptoms. If it is neither a matter of reducing a deviation or giving comfort, but a matter of establishing binocular co-operation, judgment should be exerted in the selection of cases. It may be the part of wisdom — for social as well as medical reasons — to leave some patients alone and to rest content with a cosmetic surgical result.

Nor should orthoptic treatment be instituted in the belief that abnormal sensory conditions affect the surgical result adversely. Preoperative orthoptic treatment is doubtless desirable, but I have never been able to prove to my own satisfaction, except in cases of eccentric fixation, that the failure of an operation was due to the presence of sensory anomalies, say to an abnormal correspondence. To be sure, the surgical result is best if the patient has or regains binocular vision. This transforms the heterotropic patient into an heterophoric individual and such an individual, by definition, keeps his eyes straight. But this is not to say that the sensory status of the patient as such endangers the result of an operation.

It seems to me that ideally every patient with comitant strabismus who comes to the attention of an ophthalmologist should have an orthoptic evaluation. This orthoptic evaluation will tell the opthalmologist whether or not the conditions are favorable for orthoptic training and whether or not orthoptic training would seem to be desirable. If training is indicated, then the patient should have pre- and postoperative treatment, if operation is needed. The preoperative treatment should be carried out to the point at which in the opinion of the orthoptist and the ophthalmologist the treatment has yielded the maximum benefit which can be expected. The postoperative treatment should begin as soon as possible after surgery, preferably within a matter of days.

CONCLUSIONS

While there may be a question about the need and the advisability of orthoptic treatment in cases of non-innervational comitant strabismus, there can be no question about the need for some of the other non-surgical procedures which have been discussed. There can be no question about the need for early and thorough correction of the refractive error, and there can be no question about the need for insuring good fixation, both in distance and near vision, and maximum visual acuity in either eye. It is desirable, insofar as it is possible, to transform every case of uniocular strabismus into a case of alternating strabismus with good visual acuity, good fixation, and a minimum of suppression in each eye, before surgical treatment is undertaken. If it is possible to do away with an abnormal retinal correspondence and in addition to establish some fusion at the objective angle, this is all to the good.

But one must not expect the impossible. One must not expect non-surgical treatment to remove permanently an angle of squint of non-innervational origin. This is where the surgical treatment comes in.

University Hospitals

The Surgical Indications in Duodenal Ulcer

NORMAN YOUNG, M.D., AND KARL A. MEYER, M.D., CHICAGO

THE role of surgery in the treatment of duodenal ulcer is one of many complexities. Its evaluation by many groups throughout the years has evolved into an accumulated number of facts and data concerning the diagnosis, treatment, morbidity and mortality. The literature abounds with conflicting data, and statistics regarding successful treatment in the duodenal ulcer problem. This fact alone proves the many variables which exist. I think we will all agree that no two ulcer patients are exactly alike.

At the Cook County Hospital a very definite step forward in the surgical treatment of duodenal ulcer has been made in recent years. As the operative mortality has decreased, the surgical indications have increased in favor. These indications are directed not toward the duodenal ulcer per se, but only to the ulcer which has gone on to some major complication.

We consider, in general, four such complications: perforation, hemorrhage, obstruction and intractable pain. The problem of malignancy here is, of course, negligible.

The first complication to be considered is that of perforation. Duodenal ulcers are known to perforate in 2 to 3 per cent of all ulcer patients.[1] This may be the first sign of a duodenal ulcer, although the majority of patients have had symptoms anywhere from several days to many years. It usually occurs between the ages of 25 and 45 years, but may occur at any age. The symptoms and signs of perforation are well known.

The indication for early surgery here is obvious. This consists of closure of the perforation and aspiration of the gastric spillage from the subphrenic spaces, colon gutters and pelvis. We prefer a free omental graft for closure of the hole.

The results of the above surgery are excellent, with a mortality rate in our hospital of 2.1 per cent as compared with a 15.8 per cent mortality in patients treated conservatively.[2] The latter group were, for the most part, patients misdiagnosed early, or were admitted late to the hospital for treatment.

There are two main objections to conservative management. One is that there is no way to determine the size of the perforation or adequacy of the sealing off process until very late, and the other is the prevention of secondary abdominal abscesses by removal of the gastric spillage.

The time interval between perforation and treatment is extremely important. Most patients enter a hospital within two to three hours after perforation, and are operated before twelve hours have elapsed. In cases of delayed hospital admission, no time limit should be adhered to as a criterion for surgical versus nonsurgical treatment. If the abdominal findings are localized, then management should follow that outlined by Ochsner for peritonitis. If improvement is not steady, or there is evidence of increasing peritonitis, then surgery becomes necessary, and is associated with a higher mortality.

Once the patient has recovered from a perforation, there are two questions to be answered. One is, "What are the probabilities as to future ulcer trouble?" and, secondly, "What complications are most likely to develop?" Clairmont and William Mayo used to teach that once an ulcer perforated, the patient was cured.[3] It is now known that the patient cannot be given an absolute clean bill of health. On the contrary, it can be prognosticated that approximately one-third of all patients with perforations will remain well without any treatment whatsoever,

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one-third must be maintained on medical management, and one-third will eventually need definitive surgery for their duodenal ulcer.[4]

Work done at the Cook County Hospital answers the second question concerning complications.[5] (Slide) This represents 237 patients with previous ulcer perforations who presented themselves to the hospital for treatment of one of the major ulcer complications. Intractable pain was the leading complication with 86 per cent, followed by bleeding in 34 per cent, obstruction in 21 per cent, and reperforation in 17 per cent.

The last group was of extreme interest, as one patient had reperforated on five different occasions. The time intervals between perforations was noted to be extremely variable. In one case the patient went 28 years before his ulcer again perforated.

A unique perforation is the so-called "Forme Fruste" type. This responds well to conservative methods, but usually goes on to some complication requiring surgery.

The second complication is that of hemorrhage. (I will merely mention this important complication, as it has been discussed in detail in the first presentation.) Again, this complication may be the first sign of a duodenal ulcer. The majority of ulcer bleeding is in small, intermittent episodes from superficial erosions. However, 20 to 25 per cent of all ulcers bleed massively at one time.[6]

The indication for surgery here, above all, conforms to the principles of proper timing. That is, in massive hemorrhage, with a debilitated patient, a situation is created which may change hourly. All the facts must be correlated and surgical intervention attempted at the most opportune moment.

The third complication is obstruction. Gastric retention, with associated vomiting, secondary to an active duodenal ulcer, occurs rather frequently. However, true organic obstruction is not a common sequelae. These two types of obstruction must be differentiated.

The first is a physiological obstruction which is, in fact, a pyloric obstruction, and is due to a combination of factors leading to persistent vomiting. These are attributed to reflexes from an active ulcer, local edema, motor disorders of the pyloric ring, and reversed peristalsis.

The second is organic obstruction, and follows chronic ulcer activity, especially of large posterior ulcers. Eventually this leads to a scarring and contraction of the duodenum. This cicatrix, in contrast to the first type, is a true duodenal obstruction.

Diagnosis of organic from physiological obstruction is mandatory, as this delineates the surgical from nonsurgical patients. Three procedures are done concomitantly: 1. The initial treatment of all cases is instituted. 2. Diagnosis is made while viewing the results of treatment. 3. Patients who are needful of surgery are being properly prepared without loss of time.

Treatment is divided into three phases. The initial phase consists of stomach rest with nothing by mouth; continuous nasogastric suction; sedation with barbiturates; intravenous fluids, electrolytes, and proteins; and finally, whole blood.

The second or intermediate phase is slow dietary progression from oral liquids to a soft, bland diet.

The final phase consists of a strict ulcer regimen. A barium meal or motor meal, if one prefers, is done to re-evaluate the amount of retention, and to scrutinize the ulcer characteristics. Lastly, surgery is indicated in those patients with persistent obstruction.

A rather simple and inexpensive test for gastric retention that may be carried out at any time during the course of the treatment is a pyloric balance study. This consists of introducing a measured amount of glucose solution into the Levin tube and clamping it off. If, at the end of one hour, little fluid is aspirated, then the obstruction is considered relieved. Should the amount injected and removed be identical, the obstruction is partial. If more fluid is removed than injected, the obstruction is almost complete.

Approximately three-quarters of all obstructions open up with this treatment. These patients are then to be treated medically, but may go on to recurrence or to other complications. Those that remain obstructed are operated only after the patient has been returned to the best nutritional state possible. Hypoproteinemia, anemia and alkalosis are corrected, and a positive nitrogen balance is considered essential.

The fourth and last complication is pain. Before a patient is subjected to surgery for in-

tractable ulcer pain, every effort should be made to see that proper medical management existed beforehand. Medical care does not mean only sedation, antacids, antispasmodics and strict dietary regimn, but investigation and help in the patient's economic, social and psychological background as well. It may be added that very young patients with pain as the only complication of ulcer should be maintained on medical management as long as possible. Many of these ulcers will heal spontaneously at a later date when the stress situations have changed.

Duodenal ulcers with severe pain indicating necessary surgery are oftentimes penetrating. The common site is into the pancreas, posteriorly, and may be associated with some degree of pancreatitis. This is the type of patient depicted as "typical" of the ulcer diathesis with pain, anorexia, weight loss, nausea, vomiting and malnutrition.

I would like to point out that of the four complications of duodenal ulcer discussed, the first three are quite obviously objective. This last complication of pain is subjective, and quite certainly taints the statistics in both the surgical and medical treatment of ulcer.

SUMMARY

1. In summary, perforation, hemorrhage, obstruction, and intractable pain constitute the major complications of duodenal ulcer.

2. The surgical indications of these complications have been discussed.

3. No attempt was made to indicate the best surgical procedure for any one complication except acute perforation.

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A new concept is emerging of the kinds of services and facilities that will be required for comprehensive care of the chronically ill, the disabled, and the aged. This concept recognizes the need for a wide variety of services and facilities, but the emphasis is on prevention and rehabilitation. The patient is viewed as a person in his home in his own community where he will receive the greatest part of his care under the supervision of his personal physician. The community remains the central factor in any plan for his care. Leonard A. Scheele, M.D., Surgeon Gen., PHS., Pub. Health Rep., Jan., 1956.

The Recognition of Streptococcal Infections in the Prevention of Rheumatic Fever and Acute Glomerular Nephritis

ALAN C. SIEGEL, M.D., WINNETKA

THE physician who sees a child or young adult with an acute upper respiratory illness must differentiate, by clinical or laboratory means, between a viral and a bacterial infection, and then must treat judiciously with a specific antimicrobial agent, if indicated. The commonest bacterial agent implicated in upper respiratory infections is the Group A streptococcus. Infections due to this organism are of primary concern because of the development of non-suppurative complications such as acute glomerunephritis and acute rheumatic fever in a certain percentage of untreated patients.

The importance of streptococcal infections is further emphasized by the controlled studies of Wannamaker and Rammelkamp and members of the Streptococcal Disease Laboratory in Cheyenne, Wyoming, which showed that effective antibiotic treatment of the preceding streptococcal infection will prevent the subsequent development of acute rheumatic fever and acute nephritis. We ought to do everything in our power to diagnose streptococcal infections carefully and accurately and to give adequate treatment to all patients and contacts in whom the organism has been isolated.

This paper will discuss the difficulties encountered in the diagnosis of streptococcal infection in children, and will point out certain simple and accurate methods to facilitate diagnosis. It also will relate the public health aspects of streptococcal infections to the family and the need for a liaison between the public health physician and the practitioner in the control of streptococcal infections.

During the preceding 14 months my associate, Dr. George Eisenberg, and I have had an opportunity to observe 729 children, ranging respiratory infections. All were acutely ill and had a temperature of 101 degrees F. or more in age from 2 to 14 years, with acute upper during the period of observation.

Considerable discussion had arisen between us concerning the diagnosis of bacterial infections and their differentiation from viral infections. Each of us had an idea as to what a "strep throat" looked like; myself, from membership in the Streptococcal Disease Laboratory in Wyoming during the previous two years, where I had the opportunity to observe young adults with proved classical streptococcal infections. My associate had observed children during 20 years of practice and felt he could tell what a strep infection looked like.

Our mutual concept of a classical strep throat is shown in Table 1 and follows closely the criteria set up by the committee of the American Heart Association. Classical hemolytic streptococcal infection of the respiratory tract is a febrile illness, usually of acute onset, and as-

Table 1.
Signs and Symptoms of Acute Streptococcal Infections

Common Symptoms	*Common Signs*
1. Sore throat	1. Red throat
2. Headache	2. Exudate
3. Fever 101 to 104°	3. Swollen glands
4. Abdominal pain	4. Rash
5. Nausea and vomiting	5. Acute otitis, sinusitis

Instructor in Pediatrics, Northwestern University Medical School.

Attending Pediatrician, Children's Memorial Hospital, Chicago

Presented before the Joint Meeting of the Section on Preventive Medicine and Public Health and Section on Pediatrics, 115th Annual Meeting, Illinois State Medical Society, Chicago, May 19, 1955.

sociated with chills, headache, malaise, and a variable degree of prostration. The characteristic symptom is severe sore throat. Cough and coryza occasionally are pressent but are not prominent complaints. Horseness is rare. Several observers have shown that redness and edema of the pharyngeal tissues and tender anterior cervical glands appear in only 60% of streptococcal infections. A review of 100 patients entering the hospital with acute rheumatic fever in whom either cultural or immunologic evidence of a recent untreated streptococcal infection was found would show that 60 would give a history of classical strep throat; 20-30 would remember a recent cold or scratchy throat; 20 would have no recollection of any recent upper respiratory infection. Rantz has shown the variable picture of streptococcal disease in children at various age groups especially under age 6 and has emphasized that a "runny nose or red throat without exudate may be an acute streptococcal infection in this age group".

This 40% represents a sizable portion of missed cases and an attempt has been made by us to pick these cases out of the population. Through the cooperation of Dr. Herbert Miller, Health Officer of our village community, we obtained sheep's blood agar plates and sterile cotton swabs. An incubator was installed in our office. Throat cultures were obtained on all 729 patients at the time of initial observation. We swabbed the posterior pharynx and tonsillar area and the cultures were swabbed directly on the blood agar plates within two hours, and were streaked out with a wire loop and incubated overnight. As you can see, it is relatively simple to pick out the beta hemolytic colonies from other saprophytes or nonpathogens such as the alpha or green strep. Sheep's blood is a selective medium which allows only the beta hemolytic streptococcus and the staphylococcus to produce complete hemolysis; the latter is easily distinguished from the former. This method was used to distinguish macroscopically in a rapid and simple manner between the presence and absence of B.H.S. in the throats of the 729 patients.

At the time of throat culture, each of us made a notation of our diagnostic impression of the patient's illness. These have been grouped into 3 classifications. Table 2.

Table 2.

I	Classical strep throat or scarlet fever
II	Questionable Strep Inf.
	A. Sore throat
	B. Swollen glands
	C. Red pharynx and tonsils
III	Non-streptococcal Inf.
	A. URI
	B. Grippe
	C. Cold

Category I: Classical streptococcal infection as I have described and including scarlet fever.

Category II: Questionable streptococcal infection. As you will note, this group includes children with clinical signs and symptoms of definite sore throat and occasionally accompanying acute otitis or sinusitis. Symptoms such as malaise, fever, and headache were common. All patients had red or inflamed pharynx or tonsils but none had exudate. Many patients had tender anterior cervical glands.

Category III: Nonstreptococcal infections includes those patients with symptoms and signs of upper respiratory infection not localized, such as hoarseness, coryza, swollen glands, or malaise. We would commonly feel that these patients had either URI or the grippe. They did not have severe sore throat or symptoms referable to the pharynx or tonsillar area.

Follow-up cultures were obtained on approximately 40% of patients with positive cultures 14 to 21 days after the initial visit. Recurrences were noted and cultured. In all instances of positive cultures the number of B.H.S. colonies on the blood plate were enumerated and classified from 10 colonies per plate, a one plus culture to pure cultures or B.H.S., a four plus culture. Approximately 75% of the positive cultures were three to four plus. Half of these were sent to the Streptococcal Disease Laboratory in Wyoming for grouping and typing to confirm the presence of a pathogenic streptococcus. Ninety per cent were Group A, therefore, pathogenic; 10% were other groups, of questionable importance.

Table 3 depicts the correlation between our initial diagnostic impression and the presence of Group A streptococci. Thirty per cent of the 729 children were found to harbor beta hemolytic streptococci. Of these 224 children,

Table 3.

DIAGNOSIS VS CULTURAL RESULTS

Diagnostic Class.	Pos. Hem. No.	Beta Strep. %	Neg. Hem. No.	Beta Strep. %
I	125	71	51	29
II	66	42	88	58
III	33	9	366	91
Total	224	30	505	70

125, or 55% were diagnosed as classical strep throat or scarlet fever, 66, or 21% were classified as questionable strep infection, and the remaining positive cultures were seen among children with URI; grippe, or a cold. This would mean that 76% of streptococcal infections would manifest the symptoms and signs of sore throat, scarlet fever, tonsillar exudate, or swollen anterior cervical glands. However, when one considers the number of times these diagnoses were made in the absence of beta hemolytic streptococci, one notes that 29% of the patients in Category I were negative and 58% of our patients in Category II were not streptococcal. This means that we are correct 70% of the time, using classical criteria but wrong 60% of the time calling sore or red throats alone, strep throats.

Thus one cannot use the second classification accurately to diagnose streptococcal disease in children. The dilemma arises, however, when one considers the 40% of these children with positive cultures in Category II. This group cannot be neglected because this 40% probably represents missed cases which ultimately are susceptible to nonsuppartue complications. On the other hand, is it fair or good medicine to give antibiotics to the other 60% with negative cultures because they have sore or red throat and fever? We have come to rely upon throat cultures and frequently delay specific therapy 24 hours in Group II to ascertain the presence or absence of streptococci.

The question of whether patients harboring Group A streptococci may have been incidental carriers is difficult to answer. We did not obtain leucocyte counts on more than 10% of these patients. Catanzaro and Rammelkamp have emphasized the importance of the persistence of streptococci in the patient who develops rheumatic fever. In addition, the human carrier is important as a mode of spread of streptococcal disease in the community and eradication serves to reduce rheumatic fever in the community.

The clinical course of streptococcal versus nonstreptococcal infections was difficult to ascertain since almost all patients with positive cultures received antibiotic therapy. It is our impression that the clinical course was shortened in these children, although Wannamaker and Denny have shown by controlled observations that the clinical course of treated and untreated streptococcal infections, barring suppurative complications, is virtually the same. No children in either group developed acute rheumatic fever or acute nephritis, although both complications have occurred in the community during the same time period.

The school age child as a prime in the family has received attention from Kemp and Dingle. These observers feel that infections begin in the family as a result of their introduction by the school age child. In streptococcal infections or scarlet fever, many physicians institute prophylaxis with sulfa or penicillin to other members of the family. We have had the opportunity to obtain throat culture on members of 43 families of children with streptococcal infection or scarlet fever.

In Table 4 one notes that 32 of 153 persons, or 20% harbored beta hemolytic steptococci in their throats on examination.

Table 4.
Incidence of Beta Hem. Streptococci
Among Family Contacts

Tot. No. Cult.	Tot. Fam. Cult.	B.H.S. Pos.	B.H.S. Neg.
153	43	32	121
Percent of Total		20	80

In order to determine whether the school age sibling was a primary family infector, the families were further studied from the point of view of duration of symptoms in the patient.

In Table 5 when symptoms have been present in the school aged child 24 hours or less, the incidence of positive family cultures is sharply reduced. This would suggest that prophylaxis or throat cultures should be instituted only if the patient has been sick over 24 hours.

It is felt that the throat culture offers a simple and effective means of detecting beta hemolytic streptococci in children with bacterial upper

Table 5.
Incidence of Beta Hemolytic Streptococci Among Family Contacts According To Duration of Illness in Patient

Duration of Illness in Patient	Families	Contacts: Pos.	Neg.
24 hrs. or less	22	1	67
Over 24 hrs.	21	31	54
TOTAL	43	32	121

respiratory infections. The actual cost of material in each blood agar plate is 8c to 10c. Either the hospital laboratory may be induced to make these for a nominal cost or the services of a clinical laboratory may be engaged to furnish them. A survey of five laboratories on the north side of Chicago reveals a cost of from 15c to 25c per plate. We found that within a month our nurses could learn to streak and read plates under our supervision with considerable accuracy.

SUMMARY

Methods have been presented to facilitate the recognition of streptococcal infections. It is felt that these methods will make clinical medicine more precise and more gratifying and will aid in the adequate treatment of these infections. In addition, the relationship between the clinical case and the family has been presented to thus extend the role of the clinician as an epidemiologist in the ultimate prevention of acute rheumatic fever and nephritis.

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Septal spur

During the past four years I have seen, operated upon, and made a follow-up study of 21 patients suffering cephalagia which resembled Sluder's sphenopalatine ganglion syndrome. These patients had, as the only disclosed etiology, a visible spur or ridge of the nasal septum, which contacted or impinged on the opposite lateral nasal wall or structures, innervated by sensory peripheral branches of the fifth cranial nerve and the automatic nervous system. *Harry L. Cunin, M.D., Septal Spur Cephalagia. Pennsylvania M. J. April* 1956.

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Physicians and organized medicine are rightfully if a little tardily assuming a more active role in health education. Health forums sponsored by local medical societies have served a most useful purpose, including the demonstration that the physicians of a community can work together and pool their efforts in a common cause. Hospitals need to take a more active part in health officers. L. E. Burney, M.D., Calif. Med., Jan., 1956.

Oxytetracycline–Hydrocortisone Ointment in Pediatric Dermatoses

M. B. ANDELMAN, M.D., AND L. A. NATHAN, M.D., CHICAGO

SINCE their introduction, the sulfonamides and antibiotics have been used successfully, both topically and systemically, in a wide variety of skin disorders. But their success has been mitigated by their high sensitizing potential. Similarly, the adrenal cortical steroids, cortisone and hydrocortisone, have found extensive application in dermatologic practice, but their systemic use has been limited by the possibility of serious adverse effects. It has been shown that systemic hormonal effects need not be feared when hydrocortisone is administered by local inunction in dermatoses[1] because of the apparently complete absence of systemic absorption from the skin[2]. It has been demonstrated also that of the several so-called broad-spectrum antibiotics oxytetracycline (Terramycin®), topically applied, does not evoke any sensitization to its subsequent systemic use.[3]

Hydrocortisone, which is now thought to be the principal glucosteroid hormone normally secreted by the adrenal cortex,[4] has been effective when used topically in infantile eczema[5,6] atopic dermatitis, contact dermatitis, and anal and genital pruritus although symptoms frequently return on withdrawing the therapy.[1,7-12] Oxytetracycline topically applied is of value in impetiginous and other primary skin infections and also in the eradication of secondary pyogenic infections which frequently exacerbate underlying dermatoses.[13,14]

Topical preparations combining both these agents together may be used with satisfactory results in various dermatoses.[10,15] They are without antagonistic effect upon each other and the suggestion has been made[10] that in certain cases they may be synergistic in combination. The safety and efficacy of this combination in a topical ointment suggest a wide field of use in pediatric practice. The present study was undertaken to evaluate this combination in a variety of common pediatric dermatoses.

MATERIALS AND METHODS

An ointment combining oxytetracycline and hydrocortisone* was used in treating 50 pediatric patients. A few had primary pyodermatoses, while the majority had dermatoses complicated by or potentially susceptible to secondary pyogenic infection. The children ranged in age from 5 weeks to 15 years and all were treated two, three or four times daily with Terra-Cortril Topical Ointment®. Treatment was continued until the lesions were cleared or showed no further improvement. In no case was treatment continued longer than two weeks; in most cases three or four days was sufficient to evoke the full therapeutic effect of the ointment. During the interval no other medication was given.

RESULTS

The results are shown in the following table:

Diagnosis	Number of Cases	Results of Treatment Exc.	Good	Fair	No Imp.
Diaper dermatitis	15	2	12	1	—
Atopic and eczematoid dermatitis	6	1	1	4	—
Impetigo	5	1	4	—	—
Urticaria	4	1	2	1	—
Burns (2nd deg.)	2	—	2	—	—
Infected lacerations	3	—	3	—	—
Intertrigo	2	—	2	—	—
Insect bites	2	—	—	2	—
Allergic blepharitis	1	—	1	—	—
Paronychia	1	—	1	—	—
Molluscum contagiosum	1	—	1	—	—
Poison oak rash	1	—	—	1	—
Psoriasis	1	—	—	1	—
Infected thumb	1	—	—	1	—
Varicella	1	—	—	1	—
Varicelliform eruption	1	—	—	1	—
Neurodermatitis	1	—	—	1	—
Measles	1	—	—	—	1
Ringworm	1	—	—	—	1

*Terra-Cortril Topical Ointment, containing 3 per cent oxytetracycline hydrochloride (Terramycin Hydrochloride) and 1 per cent hydrocortisone (Cortil) in petrolatum, was supplied for this study by Dr. M. William Amster of Chas. Pfizer & Co., Inc., Brooklyn, New York.

Excellent indicates complete remission of dermatosis within a week. *Good* indicates marked improvement. *Fair* indicates relief of pruritus and/or objective improvement only while the treatment was continued.

All 15 cases of diaper dermatitis responded to treatment. Two cases were cleared completely in less than four days. Symptoms recurred in only one on stopping the treatment. While diaper dermatitis is generally self-limiting, we are impressed with the speed and efficacy of the treatment.

There was improvement in all six cases of eczema, all five cases with impetiginous involvement, and all cases of urticaria, intertrigo, infected lacerations, and burns. One case each of several other disorders was permanently improved, as tabulated.

In a number of other dermatoses, improvement was seen as long as treatment was continued, usually with relief of pruritus, but no permanent results were obtained. Symptoms of the underlying conditions recurred on withdrawing treatment. This was true in four cases of eczema, although two others were benefited permanently. Temporary relief was obtained in two children treated for insect bites, and one case each of several allergic and other inflammations. There was no improvement in the one case each of measles and ringworm.

SUMMARY AND CONCLUSIONS

Fifty cases of skin disorders common in children have been treated by local inunction with Terra-Cortril ointment; 48 (96 per cent) showed improvement under this therapy, and in no case was there an adverse reaction to the treatment.

Both the acute histamine-like reactions and the more chronic eczematoid conditions common in pediatric cases showed a rapid clinical response. In cases involving secondary infection the ointment was both supportive and therapeutic, as observed in several cases of complicated diaper dermatitis. This result is in agreement with earlier studies on oxytetracycline and hydrocortisone administered independently. The speed with which pruritus and inflammation subsided in acute dermatoses is of particular interest.

The preparation used in this study is an effective therapeutic agent for pediatric inflammatory dermatoses where secondary infection has developed, and as a prophylactic agent when secondary infection is likely to develop.

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Nasal Fractures: Diagnosis and Management

IRA J. TRESLEY, M.D., CHICAGO

TODAY's stress on increased mechanization, power, and speed places more responsibility on the medical profession toward the management and treatment of nasal fractures. The nose, because of its facial prominence, is readily susseptible to injuries and nasal bones are broken more often than any other bones of the face.

The external nose is partly bony and partly cartilaginous. The upper bony part consists of paired nasal bones which articulate with processes from the frontal and maxillary bones. They articulate above with the nasal part of the frontal bones and laterally with the frontal processes of the maxilla. The lower part of the nasal pyramid is largely cartilaginous and usually is described as being formed by five major cartilages and a variable number of smaller ones. The major cartilages are the two upper lateral cartilages (triangular) above; the two lower lateral (greater alar) below; and the median unpaired septal cartilage (quadrangular). The upper lateral cartilages are continuous with each other across the midline and also with the septal cartilage. It frequently is described as a single cartilage and is called the nasal septal cartilage. The lower nasal cartilages, or greater alar cartilages, consist of a medial and lateral crus. The medial crura form the columella. The lateral crura give shape to the ala, and it is these cartilages which bind and hold open the nasal apertures.

The nasal septum is formed by the perpendicular plate of the ethmoid posteriorly and the septal cartilage anteriorly. The vomer forms the postero-inferior portion of the septum, while the medial crura of the lower lateral cartilage (greater alar) and the low nasal process (crest) of the maxilla complete the septum anteriorly.

FACTORS PRODUCING FRACTURES

The direction, force, and traumatizing object determines the line of displacement. A blow to the side of the nose may result in a simple fracture on one nasal bone. It may include the frontal process of the maxilla causing depression of one side of the nose, or the entire bony arch may be dislocated from its attachment at the base and deviated to one side. A direct blow over the bridge of the nose may fracture the frail inferior edge of the nasal bone. If the impact occurs at a higher level, the nasal frontal articulation may be separated. This is unusual.

A recent survey of 190 nasal fractures at the Manhattan Eye, Ear & Nose Hospital revealed that 80% of the fractures occurred at the junction of the thick upper with the thin lower portion of the nasal bones. The junction between the thick and thin portion varies in different individuals and appears to be the determining factor in the level of the fracture.

Injuries or dislocations of the septal cartilage may be associated with fractures of the nasal bones or may occur independently. When the nose is struck by a blow against the tip and columella, the septal cartilage may be forced upward against the perpendicular plate of the ethmoid. The septal cartilage may be fractured along a vertical line just anterior to the vomer, or along a horizontal line parallel to the vomer. The cartilage can be dislocated from its vomerine groove and from the crest and the nasal spine of the maxilla resulting in an anterior septal dislocation. Septal fractures often are accompanied by injury to the nasal lining, such as lacerations of the septal mucosa or as hematomas of the septum. If injuries to the septum are untreated, deviations result which often need surgical intervention later.

DIAGNOSIS

The diagnosis of fractures of the nasal bones should be determined by a careful history, clinical examination, and X-ray evaluation. The history can give us informative clews as to the

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mechanism of the trauma and its resultant deformity. As an example, a lateral blow with a blunt object can result in a simple fracture. If the force is great, a lateral deviation will be the consequence. Little difficulty is encountered in making the diagnosis, if the deformity is apparent. Careful palpation, provided the lesion is not obscured by gross swelling, will reveal the bones to be freely movable by the presence of crepitation. A meticulous intranasal examination, if necessary under general anesthesia, will determine any tears in the mucosal lining of the nose and any evidence of bleeding. When bleeding is present, there usually is a tear in the mucosa, and in any injury resulting in a tear in the lining mucosa, fracture generally is present. Hematomas of the septum may be further evidence of fracture of the nasal bones or an independent fracture of the septum.

X-rays should be a valuable aid in establishing the diagnosis, especially where swelling obscures the external contour and where the fragments are impacted. X-ray should be taken with a soft ray for both lateral and posterior-anterior projections to show the relationship of the bony arch to the soft tissues.

TREATMENT

Early reduction of fractures of the nasal bones is a relatively simple procedure if undertaken soon after the injury and before the onset of marked swelling. This can be accomplished under local anesthesia for adult patients, and a short general anesthesia for children or highly sensitive individuals. Topical anesthesia consisting of 10% cocaine may be applied to the inside of the nose, anesthetizing the nasal ciliary nerve. External infiltration with 1-2% procaine blocking the external nasal nerve and the infraorbital nerve will give satisfactory anesthesia.

Most simple fractures can be set following anesthesia with a rubber covered Kelly forceps or some blunt instrument, to raise the fragments into position. This can be done in combination with external manipulation. Frequently a distinct click will be heard and felt by both patient and operator after fragments are replaced in their normal positions. Lateral displacements frequently will remain in position without any support but a splint is used for external protection and prevention of hematoma. The types of splints commonly used are stent compound, aluminum, or copper splints which are moulded to the contour of the nose and held in place with external taping. The splint remains from a week to 10 days, or longer if necessary.

To maintain the replaced fragments, protect the nasal mucosa, and control the bleeding to some extent, insert intranasal packing of a vaseline type into the nose. Packing generally can be removed within 24-48 hours, unless large tears of the mucosa are present or it is necessary to maintain the nasal septum in position. If there is a tendency for the deformity to recur, this may be due to marked comminution of the bony fragments, or incomplete replacement. The fragments may be realigned, if possible. Complicated fractures may need other methods of handling.

Fractures or displacements of the nasal septum, either occurring alone or with fractures of the nasal bones, should be given careful attention to insure proper replacement and restore an adequate airway. This can be done by grasping the nasal septum with an Asch forceps, rotating the displaced septum back into its midline position. If its position is not maintained, open reduction or submucous resection is performed, removing the fracture fragments and at the same time removing any hematoma present. This is followed by intranasal packing and external splinting, if accompained by a bony fracture. Hematomas of the septum without apparent fractures should be incised and evacuated. Antibiotics or other chemotherapy generally are given to guard against infection.

INFANTS AND CHILDREN

In any suspected injury to the nose where there is a swelling one should not hesitate, under a light general anesthetic, to examine and gently elevate any possible depression with a blunt instrument high in the nostril. This is a simple procedure and at times its use may be questionable, but many deformities in adults which are difficult to account for by the patients may be a result of a neglected childhood fracture. Fractures with gross deformity present no difficult problem, and should be treated in much the same way as fractures in adults.

SOFT TISSUE LACERATIONS

In compound fractures, care first must be given to the closing of any tears in the mucous membrane utilizing fine interrupted catgut su-

tures. The bones or cartilages can then be replaced in the usual manner, and a few interrupted sutures are inserted in the perichondrium or periostium to help secure their position. The skin is then closed in separate layers with fine black silk. Internal packing and external splinting, as described, are used for immobilization.

LATE COMPLICATIONS

Late complications are external deformities of the nose associated with deviation of the nasal septum resulting not only in a gross disfigurement but also impairment of the respiratory function. Types of deformities may be variable and include twist or scoliotic nose, saddle or depressed nose, or dislocated septum. These deformities are the result of mismanagement or neglected injuries to the nose and patients usually have to resort to surgery for functional and cosmetic correction.

SUMMARY

Early recognition, thorough clinical evaluation, and proper surgical management are imperative for restoring the nose to its normal contour and function.

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The first impression

Bone marrow studies are done routinely in our medical institutions not only in suspect cases of malignancy but also in any case presenting a diagnostic problem. By the study of the normal we have learned to recognize early abnormalities, and malignant disease being one with such protean manifestations, we continually find first evidence of it in marrow imprints if this test is done frequently. *C. H. Jaimet, M.D. and H. E. Amy, B.A., R.T. Cancer Diagnosis by Bone Marrow Smears. Ann. Int. Med. April* 1956.

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All parents of college students should investigate the health program of the college which their sons and daughters attend and insist on high standards there as well as in other divisions of the institution. Furthermore, they should be willing to pay for good service. Dana L. Farnsworth, M.D., Bulletin, NAT, May 1956.

No age limit to cataract surgery

Cataract surgery can be done without endangering life or general well being in the extremely aged and even in the presence of chronic disease processes such as diabetes, arteriosclerosis, asthma, arthritis, and hypertensive cardiovascular disease (including borderline congestive failure). To illustrate the age group involved, and to demonstrate the safety of cataract surgery, I would like to cite my own experience. Of the last 300 consecutive cataract operations (excluding congenital and traumatic cataracts) that my partners and I have done, the ages of the patients have varied from 21 to 98 years. Half of the patients were over 66, 33 were over 80, and five were over 90 years of age. Using the safeguards to be described we have had no fatalities and have had few momentous complications. *Milton J. Lilly, Jr., M.D. Cataract Surgery in the Aged. West Virginia M.J. July* 1956.

The Dermatologist's Role in Medicine

HANS M. BULEY, M.D., CHAMPAIGN

SINCE the introduction of antibiotics, the practice of dermatology—not unlike that of other clinical branches of medicine—has undergone drastic changes. The times when 30 to 50 per cent of dermatological practice consisted of syphilitics in various stages of the disease, and when pyodermas and other bacterial infections of the skin were major therapeutic problems, are gone forever. Scabies, formerly one of the most common diseases, has been virtually wiped out by modern insecticides. It may not be long until clinically applicable antibiotics with fungicidal effects are developed and when viral skin diseases can be overcome by immunological procedures.

Contrariwise, skin reactions to environmental conditions are much more common than in the past. Technological trends in industry, with increasing use of man-made complex synthetic materials, commonly found in every household and shop, have greatly augmented the incidence of allergic eruptions or contact irritations. The incidence of occupational dermatoses has been rising for the same reason. Furthermore, the marked increase in population, the increasing rate of life expectancy and, finally, the ever spreading skin consciousness of the public, especially with regard to cancer, have increased the public demand for dermatological care. What part, then, is the dermatologist expected to play in the light of these altered circumstances of modern life?

If dermatological activities are divided into three basic areas—namely, diagnosis, therapy, and research, the dermatologist's position can be surveyed more clearly. Diagnosis, in dermatology as in any other branch of clinical medicine, is the first and most fundamental approach. Dermatologists have been criticized and often ridiculed for their love of detailed descriptions and flowery terminology, which to the nondermatologist does not seem to bear any relationship to general pathology and medicine. Perhaps there was once a time when dermatological morphology was sported excessively and considered the crown of dermatological achievement. Let us be fair, however, and not forget that the skin, because of its complex anatomy and functions, is capable of producing a much greater variety of pathological pictures than any other organ in the body. Therefore, a careful inventory and classification of all morbid processes is necessary to create a sound basis for further study. The modern dermatologist has profited much by the painstaking diagnostic and descriptive work of his predecessors and is greatly indebted to them for their achievements. Diagnostic skill in the morphology of skin disorders still is the most important prerequisite and the most valuable asset of the modern dermatologist, without which he would be useless and expendable to his patients and colleagues.

Beyond recognizing the morphological changes in the skin, the dermatologist must endeavor to assess the cutaneous pathology in relation to the general medical picture. For instance, certain constitutional patterns, such as the xerotic and seborrheic habitus, have been found to produce fairly characteristic eruptions. Allergic and psychoneurogenous mechanisms are considered in terms of multiple pathogenetic background factors. Further, irregularities in the gastrointestinal tract, dietary behavior, carbohydrate metabolism, vascular response, hormonal functions, and other systems of general physiological interest are now associated with the study of abnormalities of the skin. It is evident, therefore, that dermatological thinking—even in the realm of pure dermatological diagnosis — has approached that of the general physician, and on this basis a much better mutual understanding between skin specialist and nondermatologist is about to develop.

In the field of therapy, as in diagnosis, there is a logical dualism, resulting from historical development of topical treatment, which seems to be the traditional prerogative of the dermato-

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Chairman's address presented before Section on Dermatology, 115th Annual Meeting Illinois State Medical Society, Chicago, May 19, 1955.

logical expert, and of general medical measures. Only by judicious application of both can rational and successful treatment be effected. Local treatment methods in the broadest sense, including radiation and physical therapy, are not just an accumulation of hit-or-miss procedures, as they are often understood to be by the nondermatologist. Rather, they represent the experience of a century of careful systematic pharmacological and therapeutic study. Proficiency in applying topical medication and securing its optimal effects does not depend upon instinct alone although no one will deny that intuition is an important factor in dermatology as in any other field of clinical medicine. It is the result of careful, patient, and methodical observation over a period of years.

There are many simple skin conditions which the general physician is well equipped to treat, particularly because of his familiarity with the patient's history and background. On the other hand, the know-how of topical therapeutic methods, not unlike carefully acquired surgical skill, is still important, and it is here that the expert can fill a gap and prove himself a true friend and helper to his nondermatological colleagues.

From what has been said about modern diagnostic approaches, it becomes apparent that the dermatologist cannot limit his therapeutic work to the realm of local procedures. Inevitably, he must concern himself with the broad medical aspects and he cannot be expected to secure lasting therapeutic effects unless he incorporates the general medical management of a case into his therapeutic regimen. In doing so, he must strive to keep abreast of progress in general medicine, he must be diligent in following the general medical literature, and he must be capable of using sound judgment in recognizing his own limitations.

Pure research is the soul of all medical science and in this field, dermatology has an outstanding record. In the early years of modern dermatology, the discovery of fungous organisms as the cause of certain skin diseases led to the great discoveries of the bacteriological era. Since then, dermatologists have taken leading parts in the development of the fields of pathology, histology, immunology, allergy, radiation biology, carcinogenesis, psychosomatic medicine, and industrial medicine. The present generation of dermatologists has widened the scope of dermatological investigation still further, and in the past 30 years the wealth of information available is overwhelming.

It is unfortunate that the nondermatological physician, with some exceptions, has little knowledge of these progressive activities. Dermatologists are called too conservative, too old-fashioned, and too static in their thinking. This lack of recognition may be due to poor public relations on the part of the dermatologists. But it is more likely due to the fact that the general physician never develops an intimate interest in the field of dermatology. He has no opportunity to gain adequate insight into dermatological problems when he should—namely, at the medical school and internship level. It is not that we are lacking capable teaching personnel, in which the medical schools of Illinois particularly excel. But, partly by necessity forced upon us by an overcrowded curriculum, partly by a lack of appreciation on the part of the university administrators, dermatological teaching and hospital facilities have been badly neglected in time, space, and funds. In view of the sheer number of skin problems the general practitioneer sees in his office, which has been estimated at 10 per cent of his total case load, the medical profession, as well as the public in general, has a right to ask for a re-evaluation of this problem.

In appraising the present position of dermatology in medicine, I believe—in spite of the many changes which have taken place in recent years—that dermatology still occupies and successfully maintains the province to which it is historically entitled. Much has been accomplished in the past but more remains to be done by dermatologists of the future. The results of their work will continue to widen the horizons of medicine and will continue to help the sick, a task to which all physicians are pledged.

Problems of Cataract Surgery With a Round Pupil

EDWARD C. ALBERS, M.D., F.A.C.S., CHAMPAIGN

BECAUSE of the popularization of wound suturing in the late 30's and early 40's, cataract surgery has gone through a great change within the last 20 years. Today's surgeon seldom does a cataract operation without using a suture of some kind. In addition marked changes in postoperative care are noted. The patient is not tortured by being kept in a dark room, flat in bed, with sand bags on each side of his head. Serious postoperative psychosis in the older patient, which was so common two decades ago, is rare today.

With the introduction of wound suturing, new systems of cataract surgery have been developed along with preservation of the iris sphincter. In the presuture days, attempts to preserve the iris intact was a hazardous procedure and led to many cases of iris prolapse with all its associated complications. Many surgeons, however—even with the increase in safety measures and newer techniques—feel that iridectomy should be done in all cases. They, therefore, always remove a piece of the iris. Others use the round pupil technique in only a few selected cases, while a number, especially the younger group, do iridectomy only occasionally. Those who grasp the lens capsule at the upper pole often will do iridectomy, while those who tumble the lens during extraction find it less difficult to preserve the iris sphincter. There are many arguments pro and con for the different techniques for lens delivery. The occasional operator almost always prefers iridectomy, because he feels it is a safer procedure and has less complications.

The surgeon who plans cataract surgery on a one-eyed patient is likely to approach the operation with much more thought and preparation than he would give to a patient with two eyes. He uses the system which is safest in his hands. I felt that by getting the views of various surgeons in this type of case, I would be able to determine the general feeling of ophthalmologists as a whole toward round pupil surgery, because the surgeon chooses the method which gave him the highest percentage of success with all cataract operations. I recently communicated with 12 members of the Central Illinois Society of Ophthalmology and Otolaryngology who do considerable cataract surgery and asked them the following question: "If you had a patient with only one eye and the patient had an uncomplicated cataract, would you do iridectomy or would you extract the lens through an intact round pupil?"

Eight members preferred iridectomy because it was their usual procedure and it gave them the highest percentage of success. Four members preferred the round pupil since they felt that it was no more hazardous than extraction with iridectomy.

I also find that in such a case Chandler would select his regular procedure which seems safest; Verhoeff would select the operation which would be the safest; and Schliveh prefers iridectomy and extracapsular extraction. Post prefers iridectomy.[1] Gailey[2] does iridectomy in patients who do heavy labor, and if the lens is mature he does an extracapsular extraction. He also does iridectomy where the iris sphincter is rigid or where the iris persists in prolapsing during the operation. He states that if a surgeon feels that a round pupil is good enough for a two-eyed patient, it should be good enough for a one-eyed patient.

My own opinion is that the round pupil extraction is no more hazardous than other techniques, especially when the pressure traction method is used, the lens tumbled, and the lens is grasped as far down near the inferior pole as possible. I usually limit iridectomies to cases where

From the Department of Ophthalmology, Christie Clinic, Champaign, Illinois.

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the pupil is rigid and will not dilate, where there is considerable iris atrophy, or where glaucoma is present.

I try to preserve the iris sphincter because I believe there are the following advantages to a round pupil:

1. Iris above serves as a plane of reference.
2. Maneuvers do not injure the vitreous and the iris acts as a barrier during extraction.
3. It is easier to clear the zonula from the wound.
4. There is less likelihood of injuring the hyaloid at the time of surgery.
5. I have always felt that a good iris sphincter helped keep the vitreous out of the anterior chamber. Since vitreous prolapse into the anterior chamber is quite common, I am not so sure about this.
6. There is less photophobia.
7. There is better protection from radiation beyond the visible spectrum and the inner eye is better protected from excessive light.
8. It aids visual discrimination because of the diaphragm.
9. Visual acuity is better.
10. There is less distortion of the image.
11. Patients are much easier to refract and especially to retinoscope.
12. Cosmetic appearance is much better. Some do not like the appearance of an eye with an iris colomboma.
13. The appearance of an eye with a round pupil gives more satisfaction to the surgeon.

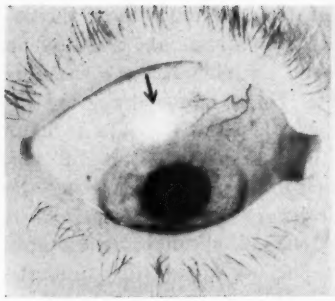
Some of the advantages of iridectomy are as follows:

1. It is easier to grasp the lens capsule at the upper pole.
2. The lens is more easily delivered when the sliding method is used.
3. Some feel that retinal detachment is less frequent in aphakia.
4. Iris prolapse is less frequent.
5. Vitreous block does not occur.

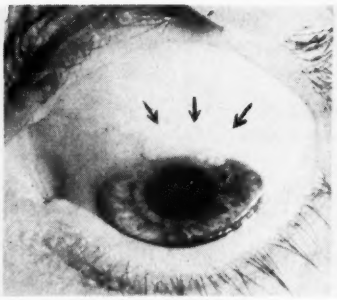
Our average cataract patient has a general checkup before surgery. The night he goes to the hospital he has a blood count and urinalysis, and Aureomycin ointment® is used in both eyes. Before retiring, he is given 1½ gr. Nembutal® and an enema. We usually perform our cataract surgery in the morning because the patient is in a more relaxed state and the surgeon has less tremor after a night's sleep. Two hours before surgery 5% Homatropine drops are instilled into the eye. One and one-half hours before surgery the patient is given 1.0 gm. chloral hydrate and 0.050 gm. of Thorazine® by mouth. One hour before surgery the patient is given 0.075 gm. Demerol® by hypo and 2 mm. of 10% Neo-Synephrine® are instilled into the eye. This preoperative medication leaves the patient in a good mental state for surgery. The pupil usually is well dilated. In the operating room, Pontocaine® is instilled into the eye several times before surgery. An O'Brien akinesia is done and 4% Novocaine® with added adrenalin is injected retrobulbarly. Novocaine also is injected into the upper lid near the margin to facilitate handling it.

Before surgery is begun, the lashes and brow are cut, the skin is cleansed with soap and water and painted with untinted tincture of Metaphen®. The conjunctival sac is thoroughly irrigated with 1-5000 merthiolate solution and saline solution. A Guyton-Parks speculum and a superior rectus bridge suture are inserted to control the position of the eyeball. A large conjunctival flap 6 mm. wide is turned down from 9 o'clock to 3 o'clock. Three pre-placed McLean-type corneoscleral 6-0 silk sutures are inserted at 10, 12 and 2 o'clock. The incision is made with a keratome and scissors. This method of making the incision is preferred to the Graefe knife because the average ophthalmologist with the average skill can make an excellent incision every time. No matter how dexterous a surgeon may be, I am sure he cannot make a good incision every time with a Graefe knife. Also, preplaced sutures make the knife incision more difficult and my feeling is that pre-placed McLean sutures can be much more accurately placed and give a much nicer wound closure than any other method of suturing.

Since the pupil usually is widely dilated, the iris must be grasped and pulled downward and two peripheral iridotomies are done at 10 and 2 o'clock. The capsule is then grasped with a Bell-type erisophake with a cup with a wide flange. The first maneuver is to raise the erisophake slightly and put counterpressure at one point at the limbus at 6 o'clock. In most cases,



Case 1. Figure 1. H. H. Cotton under the conjunctival flap.



Case 2. Figure 2. G. J. L. Fistulizing wound.

Case 3. Figure 3. M. L. Injury to the iris while making the incision.

ruptures of the zonula are easily started in this area. The lens is delivered by tumbling. The iris is then replaced with the minimum of manipulation. The sutures are tied and saline or air is injected into the anterior chamber. The conjunctival flap is then re-sutured into place with a running 4-0 plain catgut suture. Pilocarpine drops® and Eserine ointment® are instilled. Both eyes are bandaged for 24 hours. The unoperated eye is uncovered and the patient is ambulatory after the first day. All dressings are removed after the fifth postoperative day. The patient is released from the hospital on the 10th day and the sutures are removed on the 16th day.

Complications and their solutions are illustrated in the following case reports:

Case 1. Figure 1. H. H. Cotton under the conjunctival flap. This lady had an uneventful cataract extraction through a round pupil. A 6 mm. conjunctival flap was dissected down to the limbus and three preplaced corneoscleral sutures were inserted. The incision was made with the keratome and scissors. After the lens was delivered, the iris was replaced and the sutures were securely tied. A running plain catgut suture securely anchored the conjunctiva in place. Recovery was uneventful except for some edema of the conjunctival flap at 12 o'clock. Careful study with the biomicroscope revealed a large piece of cotton under the conjunctival flap. It had been our custom to use cotton dental rolls for sponges. Apparently a piece of cotton become detached and remained unnoticed under the conjunctiva. In order to avoid this accident, we now use fine-grain cellulose sponges instead of cotton. We also have replaced cotton sponges with gauze on our eye trays.

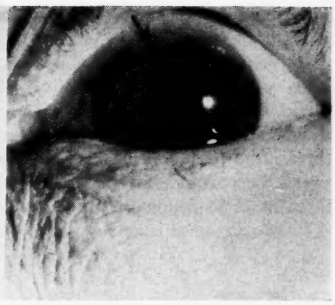
Case 2. Figure 2. G.J.L. Fistulizing wound. In this case only two pre-placed corncoscleral sutures at 11 and 1 o'clock were used. The incision was made with a keratome and scissors, and the lens was easily delivered within its capsule. Two iridotomies were done. There was some difficulty in replacing the iris before the sutures were tied. The conjunctiva was closed by a running silk suture. There was considerable edema of the conjunctival flap following surgery and on the 16th day when the sutures were removed fistulization of the wound was noted. This complication was caused by inadequate and improperly placed sutures. The temporal suture was too deeply placed and probably entered the anterior chamber. This error can be avoided by not placing the sutures too deep. It also is important to get the wound free from iris, iris pigment, zonular fibres, and conjunctiva. The conjunctiva is best kept out of the wound by carefully sewing it in place with a running catgut suture.

Case 3. Figure 3. M.L. Injury to the iris while making the incision. This 70 year old white male had a shallow chamber previous to surgery. Examination of the lens revealed moderate sclerosis of the cortex and marked sclerosis of the nucleus. A conjunctival flap was made and three pre-placed sutures were inserted. There was some difficulty making the incision with the keratome. When the incision was being enlarged, the iris sphincter was accidentally cut. No iridotomies were done. The lens was delivered easily and convalescence was uneventful. The final vision was 20/15. Accidental injury to the iris is an avoidable complication. It is less likely to happen if specially designed right and left scissors are used. It is better to use a scissors of the Aebli type with dull tips and the proper angle of the blade. The tip of the blade should always be visible when the scissors are introduced into the wound; the assistant can push the conjunctival flap out of the way while the scissors blade is inserted. The blade must be kept parallel with the plane of the iris. Sometimes in shallow chambers short snips rather than one long cut will prevent this accident.

Case 4. Figure 4. M.H. Opening of the wound during the removal of sutures. This patient had an uneventful cataract extraction through an intact pupil. On the 10th day the pupil was round, the iris was in good position, and there were no root adhesions. Both iridotomies were open. The patient returned to the office on the 17th day for removal of the sutures. The eye was carefully anesthetized with Pontocaine® and a Weeks speculum was inserted to hold the lids open. The patient was highly nervous, and when my associ-

Case 4. Figure 4. M. H. Opening of the wound during the removal of sutures.

Case 5. Figure 5. H. D. Injury to the corneal endothelium. Adhesions between the hyaloid membrane and Descemet's membrane.



Case 6. Figure 6. R. A. Prolapse of the iris.

ate attempted to hold the suture preliminary to cutting it, the patient moved, rolled his eye upward, the wound opened slightly, and an iris prolapse occurred. In highly nervous individuals who have little control of their reflexes, it is far better to wait three or four weeks before attempting to remove the sutures. It is wise to do an O'Brien akinesia in addition to using topical Pontocaine. In one case I also did a retrobulbar injection. The suture never should be grasped with a forceps before cutting it. If this maneuver is necessary, it is better to use a forceps with smooth jaws and weak blades because the average ophthalmologist does not have reflexes quick enough to loosen his grip if the patient moves. A strong-bladed scissors with sharp points, especially made for cutting corneoscleral sutures, should be used. Catgut sutures may be used but they are hard to handle; we prefer sharp Grieshaber needles and 6-0 silk.

Case 5. Figure 5. H.D. Injury to the corneal endothelium. Adhesions between the hyaloid membrane and Descemet's membrane. This patient had a shallow anterior chamber due to intumescent cataract. Tension was moderately elevated. Quite a bit of bleeding into the anterior chamber occurred when the iridotomies were done, which necessitated much irrigation of the anterior chamber. After the lens was delivered, we had considerable difficulty replacing the iris and the iris diaphragm was almost against the lens. The chamber formed in 24 hours but the hyaloid was in contact with the cornea in the upper temporal quadrant. An opaque area developed and edema extended down over the apex of the cornea. This gradually receded in about one year, but the opaque area remains and there is some edema of the stroma and epithelium in that area. The vision is 20/40. The corneal endothelium usually is injured by the irrigator needle, erisophake, or capsule forceps, specially when the chamber is shallow. We believe we are less likely to injure the endothelium if a Randolph cyclodialysis cannula is used as the irrigator when blood is washed out of the anterior chamber. When the erisophake or forceps is introduced into the anterior chamber, it is better to separate the lips of the wound well by lifting up on the conjunctival flap. There is then little danger of injury to the endothelium of the cornea. When there is any possibility of the vitreous touching the cornea or when the endothelium of the cornea is diseased, it is well to inject a large bubble of air into the anterior chamber after the sutures are securely tied.

Case 6. Figure 6. R.A. Prolapse of the iris. This 80 year old white male was operated by me by my regular technique. The lens was easily expressed. The eye was very soft during surgery, so that the iris diaphragm collapsed, making it easy to replace it. After I had tied the sutures, it was noted that the temporal suture was a little loose. Since the conjunctiva was securely sewed down by a running suture, the corneoscleral suture was not replaced. Eight hours after surgery, this patient suddenly developed severe pain in his eye and the iris prolapsed. It was noted that it prolapsed between the temporal suture and 9 o'clock and was well covered with conjunctiva. On the tenth postoperative day it was excised. The final vision was 20/20. Iris prolapse can be avoided by securely suturing the wound and carefully replacing the iris after the lens is delivered. Restlessness and discomfort in the patient increases the chances of this hazard. Postoperative nausea can be controlled easily with Thorazine and good nursing.

Case 7. M.R. Chandler's Syndrome following cataract extraction. This 80 year old white female had an easy cataract extraction through a round pupil. Only one iridotomy was done at 12 o'clock. It was noted that the chamber was formed 24 hours after surgery and the pupil was small and round. After the sixth day, the chamber became more shallow and the eye became uncomfortable. Vitreous could be seen in the iridotomy opening but did not prolapse through the pupil. Three weeks later the chamber was very shallow. The chamber angle could not be seen with the gonioscopic prism and the tension was 52. The patient was reoperated. An incision was made through the sclera 3 mm. from the limbus. The ciliary body was separated from the sclera and a peripheral iridotomy was done. The chamber deepened at once. The highest tension

recorded since surgery was 18 (Schiotz). The vision was 20/40. Chandler's Syndrome, or vitreous block, is most commonly seen following round pupil surgery. Even when peripheral iridotomies seem open, it may occur. It occurs rarely and can be avoided by minimal manipulation of the iris during surgery and two or three large iridotomies to get good communication between the posterior and anterior chambers. It occurred three times in 500 consecutive round pupil extractions. A large peripheral iridotomy usually solves the problem.

Case 8. M.L. Vitreous prolapse into the anterior chamber. This patient had a successful cataract extraction through an intact iris sphincter. There were two large iridotomies at 10 and 2 o'clock. One month after surgery the vitreous formed a slight convex dome in the pupillary area. It gradually prolapsed until at the end of a year it completely filled the anterior chamber. The cornea remained clear and the vision remained 20/20. Tension was always normal. Two years later the hyaloid membrane had ruptured and the vitreous fibers were initimately mixed with the aqueous. No reduction of vision has occurred. It is thought the vitreous either swells by taking up more fluid or becomes detached posteriorly and thus herniates. The cause of vitreous herniation is unknown. It is more commonly seen where the iris sphincter is preserved.

Extraction of a cataract through an intact iris sphincter is not a common procedure among American ophthalmologists. In our experience, however, the system of round pupil cataract surgery described by me is no more difficult and involves no more complications than any other system of surgery. Even in a small community such as ours where we must rely occasionally on inexperienced assistants and on a rapidly changing operating room staff which must be responsible for every kind of surgery, our technique can be performed easily. I have operated with student nurses, office nurses, and alone and have gotten along well if strict adherence to detail is practiced.

Practically all the complications mentioned in this paper can be avoided. None has caused serious loss of vision. A number of other complications are not mentioned in this article such as secondary uveitis due to excessive instrumentation, loss of vitreous, peripheral synechia, and occlusion of the pupil by secondary membrane due to improper use of Atropine®. These, too, may be avoided by proper adherence to detail.

Since the advantages of round pupil surgery far outweigh the disadvantages and since the complications are not numerous and practically all avoidable, this system of surgery is our method of choice.

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The outcome of acute renal failure

Renal function was studied in 16 patients who had recovered from acute renal failure. Within six months, the phenolsulfonphthalein excretion and specific gravity were normal. However, clearance values remained below the lower limits of normal in most patients. These findings are consistent with permanent damage of mild degree. After recovery from acute renal failure, progressive diminution of renal function does not occur unless some other disease causes additional renal damage. *John T. Finkenstaedt, M.D. and John P. Merrill, M.D. Renal Function after Recovery from Acute Renal Failure. New England J. Med. May* 31, 1956.

Rupture of the Uterus

CHARLES D. KRAUSE, M.D. AND GEORGE P. VLASIS, M.D., CHICAGO

THOUGH rupture of the uterus is not a common accident in obstetrics, the mere mention of it causes panic in many a delivery room. This emergency, probably more so than any other, overtaxes the diagnostic and surgical abilities of the physician. It is generally agreed that the term "ruptured uterus" applies to rupture of a gravid uterus with a viable fetus and thus excludes ectopic pregnancies, ruptured interstitial cornual pregnancies, and those following curettage. In the majority of instances this entity is "man-made" in the sense that it most often ensues following previous cesarean sections and major operative procedures on the uterus. Spontaneous rupture of the intact uterus before the onset of labor is exceptionally rare.

Large statistical surveys reveal a high maternal and fetal mortality. Fitzgerald, Webster, and Fields[1] in a review of 92,226 deliveries at Cook County Hospital, wherein 42 ruptured uteri were incurred, found the maternal and fetal mortality 54.76 and 79 percent respectively. They further noted that the rate of multipara to primipara was approximately 9:1, as is noted generally elsewhere. Any entity that carries such a tremendous loss of mothers and infants is of major concern to all of us.

Our purpose here is to present some of the silent and more unusual types of rupture that were incurred in both a service and private practice and to outline procedures in diagnosing ruptured uteri. Lack of recognition as evidenced in this group, may well cause maternal and fetal death.[2]

Commonly, uterine rupture, excluding previous cesarean section scars, follows internal version and extraction, neglected obstructive labor, forceps delivery through an undilated cervix, forceps, delivery through an undilated cervix, and unrecognized pathological constriction rings), manual removal of the placenta, and injudicious use of pituitary extract.

From the Dept. Obstetrics & Gynecology, Univ. of Ill. Research & Educational Hosp. and Evangelical Hospital of Chicago.

Some of these factors are being deleted and the day is near at hand when internal version and extraction will be reserved for delivery of a second twin and rarely for other indications. This should be so, since — exclusive of ruptures following previous cesarean sections — internal version and extraction is one of the leading major operative procedures resulting in rupture of the uterus. The clinical picture presented may vary from the classical one of the patient who cries out and grips here abdomen at the time of rupture, to one in which the patient presents only a few minimal but important signs.

In 11,257 deliveries at the University of Illinois Research and Educational Hospital, obstetrical services from 1944-1954, seven ruptured uteri were incurred. Of these, five occurred in previous classical cesarean section scars and one in a previous low cervical cesarean section. The remaining case is presented here.

Case 1. A Negro woman, 37 years of age, gravida VIII, para VII, entered the hospital with desultory pains and was noted not to be in active labor. Following a medical induction she had a NSD from a ROA position. First stage, 1 hour 30 minutes; second stage, 16 minutes; third stage, 4 minutes. Postpartum bleeding 2,000 cc. due to uterine atony was noted. A uterine packing was inserted and oxytocics were administered. Bleeding continued after uterine packing. Ergotrate 1 cc. and Pitocin® IV, 500 cc. plasma, 2,000 cc. of blood, and nasal 02 was given. The uterine packing was removed and the uterus was repacked. Bleeding continued through the second pack and the patient went into deep shock. An additional 1,500 cc blood was given and a laparotomy done. A right broad ligament hematoma was noted and a supracervical hysterectomy was performed, there being noted a tear in the lateral wall of the uterus in the region of the right uterine artery. After abdominal closure the patient continued to bleed vaginally and was in shock. Blood transfusions continued and a vaginal pack was inserted but this failed to control bleeding. A second laparotomy revealed bright red bleeding from the right broad ligament and the right internal iliac artery was ligated. After closure of the abdomen, bleeding continued vaginally. It was decided to remove the cervix vaginally and thus control the bleeding. This was done and the patient rapidly improved thereafter. She developed

thrombophlebitis postoperatively but was discharged on her 15th postoperative day as improved.

At the Evangelical Hospital, Chicago, in 22,426 deliveries from 1945-1955, nine ruptured uteri were recorded. Of these one followed a NSD; one a low cervical cesarean; one a classical cesarean; one version and extraction; one, low forceps delivery; and the remaining cases are presented here:

Case 2. Mrs. A.B., para II, gravida III, entered hospital with irregular contractions at 12:35 a.m. Labor became established at 3:30 a.m. and at 5:15 a.m. she was thought to be 6 cm. dilated and at a (-3) station. Suddenly no fetal heart tones were audible. Upon rectal examination approximately 100 cc. of blood was noted to escape from the vagina. The attending physician was unable to determine the status of the cervix. BP 120/70, pulse 60 to 80. She had slight backache, the head was noted to be floating and to be in an oblique presentation. Vaginal examination by the consultant three hours later revealed cervix 2 cm. dilated and "tissue" felt between the fetal head and examining finger. Impression was that this was a central placenta previa, and in spite of a dead fetus, laparotomy was ordered. At laparotomy an 8 pound 12 oz. infant, together with the placenta, was found lying in the abdomen with the head in the cul-de-sac and against the right lateral wall of the pelvis. Approximately 300 cc. of free blood was in the abdomen and there was a large rent in the left lateral wall of the lower segment and broad ligament. Supracervical hysterectomy and left salpingo-oophorectomy was performed, 500 cc. blood was given, and patient made an uneventful recovery. All previous pregnancies in this patient had terminated uneventfully and she had never had any surgery.

Case 3. Mrs. L.F. gravida IV, para II, known diabetic, after a prolonged first stage of 24 hours and second stage of 26 minutes was delivered of a 12 pound 13½ oz. infant by midforceps rotation from an LOT position and (No. 1) station. Shoulder dystocia was encountered and after considerable difficulty with forceful fundal pressure, the infant was delivered. Immediately following this, excessive bright red bleeding was noted. The uterus was explored and a fundal rupture was noted. Immediate laparotomy was performed. There were noted to be two separate and distinct lacerations in the body of the uterus, measuring 5 and 3 cms. in length on the anterior surface of the uterus. A supracervical hysterectomy was performed and her postoperative course was uneventful. Blood replacement was begun in the delivery room.

Case 4. Mrs. M.M. gravida IV, para III, entered the hospital with desultory pains. Diagnosis of primary uterine insertion was made by consultant and repeat SS enema ordered. Following a labor of 21 hours, an 8 pound 1 oz. infant in ROA position was delivered by low forceps. Third stage, three minutes. Ergotole® 1 cc. and Pitocin 1 cc. 1M given (routine). Patient began bleeding heavily. Uterus was packed 17 minutes later by consultant. IV Pitocin and blood begun. Twenty-five minutes later, bleeding through pack, pulse 130 and weak. Second consultant removed pack, uterus explored and a rent noted right lateral wall of lower segment extending into the broad ligament. Immediate laparotomy revealed hematoma into right broad ligament and the uterine rupture. A supracervical hysterectomy was performed; 2500 cc. of whole blood were given. Postpartum course was uneventful.

Case 5. Mrs. T., 39-year old primipara, 34 week gestation, entered hospital with ruptured membranes and irregular contractions. Four days later patient went into active labor, pains of poor quality, and dysfunctional in character. After 30 hours of labor, the head came down on the perineum and a living infant was delivered by low forceps in LOP position under saddle block anesthesia. Placenta retained one hour and 30 minutes. Placenta was manually removed with difficulty. Fifteen minutes later patient began to bleed moderately and went into shock. Plasma and blood begun. One-half hour later, pulse 160, uterus was explored and ruptured uterus was diagnosed. No Bp and no pulse obtainable. Respirations, 10 per minute. Consultant advised immediate laparotomy. No anesthesia, only intranasal 02 was given. Patient had received 9 units of blood, 1 plasma, and 4 dextran. Abdomen was opened and approximately 3000 cc. of blood was noted in the abdomen. Complete rupture of left lateral wall of lower segment was noted. A total abdominal hysterectomy was performed and the heart stopped just as the uterus was being removed and vessels were being ligated. Massage of heart through diaphragm was begun to no avail. Abdomen was closed postmortem.

In these 16 reported ruptured uteri, there was one maternal death and five fetal deaths.

DISCUSSION

Several of these cases presented some classical signs or symptoms of uterine rupture. Some were noted to have normal spontaneous deliveries and the first evidence of rupture was not discovered until the third stage of labor or some time thereafter. It is imperative that the uterus be explored following any major operative obstetrical procedure, manual removal of the placenta, postpartum hemorrhage not controlled with oxytocics, and following vaginal delivery of a patient who has had a previous cesarean section. It might even be wise to explore the uterus of any woman after any type of delivery. Exploration of the uterus should be performed systematically and not in a haphazard fashion of just thrusting one's hand into the uterus and feeling for a large rent.

Many ruptures are incomplete ruptures and will be missed unless the uterus is examined methodically. When one is to explore the genital tract because of postpartum hemorrhage or shock, the clitoris, vagina, and cervix are explored and examined for lacerations, under strict

sterile precautions with redraping of the patient and re-gloving with gauntlet gloves. The hand is inserted into the uterus, after the uterus has been relaxed with adequate anesthesia. The fingers sweep both vertically and horizontally across the entire corpus covering both anterior and posterior surfaces, including the fundus. In this fashion one can detect a vertical, horizontal, or oblique laceration. The same procedure is followed in exploring the lower uterine segment. This examination is performed bi-manually and is extremely important especially in exploring uteri that have previous cesarean section scars. If the uterine scar is noted to be abnormally thin, then in her subsequent pregnancy the patient should have a repeat cesarean section.

In performing a manual removal of the placenta, the uterus should be routinely explored afterward. This can be accomplished without having to reinsert the hand through the entire genital tract to reach the fundus. In removing the placenta the hand is inserted into the lower segment and seeks the margin of the placenta. The placenta is separated from the uterus in a horse-shoe like sweep with the back of the hand. The top of the placenta is reached and the topmost portion lies within the operator's hand. It is brought into the lower uterine segment and then either the assistant or operator places traction on the cord thus delivering the placenta. There is only one other instance in which traction on the cord for delivery of placenta is permisible and that is at time of cesarean section. Traction is not placed until the placenta is completely separated and delivered into the lower segment. With the placenta delivered by traction, the hand remains in the uterus and exploration of the entire uterus is performed. Following removal of the hand from the genital tract, the cervix, vagina, and clitoris should be examined for lacerations. With the use of IV oxytocics, the use of uterine packing is reserved for the rare and exceptional case and then it is used only once.

Repacking is mentioned only to be condemned. Whether a patient should be delivered vaginally following previous cesarean section remains an individual problem. It depends upon facilities for watching such a patient at all times, availability of blood banks, her previous postoperative course, the type of cesarean section, and the original indication for section. The question whether a repeat cesarean section should always be done is not within the scope of this presentation. With early recognition of dystocia, the discriminating use of IV Pitocin with all criteria for its use being fully met, recognition of constriction rings, and constant vigilance for detection of a ruptured uterus, we can all help in reducing this preventable maternal and infant mortality rate. One must not hestitate to explore a uterus if bleeding persists in spite of intravenous oxytocics (drip method).

The uterus should be routinely explored followed major operative procedures and manual removal of placenta. By thus "educating one's hand" while performing a definite service to his patient, he will most certainly detect these incipient and treacherous atypical ruptured uteri.

SUMMARY

1. Attention is drawn to several atypical uterine ruptures that occurred in labor and presented unusual features with a review of five case histories.

2. Discussion of routine exploration of uterus where indicated and a suggestion for a method of exploration is made.

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Acute Fractures of the Carpal Navicular Bone

JOHN GLEASON, M.D.* AND JAMES J. CALLAHAN, M.D.†, CHICAGO.

FRACTURES and dislocations involving the carpal bones represented 1.5% of all bone and joint injuries on Ward 34 Fracture Service of Cook County Hospital in 1,000 consecutive admissions. Fracture of the navicular bone was by far the most common carpal injury.

To those of us who expect to treat carpal injuries, a thorough knowledge of the anatomy of the carpal bones is essential. Otherwise, indistinct fractures and minor subluxations will be frequently passed over.

The carpus bones are divided into a proximal row and a distal row. The proximal row consists of the navicular, lunate, triangular, and the pisiform bone. These are largely cartilaginous on their surfaces. Ligaments attach on their remaining portions. In contrast, the distal carpal row, which consists of the greater multangular, lesser multangular, capitate, and the hlamate bones, is less cartilaginous but has more extensive ligamentous attachments.

Of these, the navicular and lunate bones are more exposed to trauma because of their location and their movable articulation with the radius. The carpal navicular bone, with which we are concerned here, articulates with the radius, the greater multangular, the lesser multangular, the capitate, and the lunate bones.

In 1938, Ogletz and Halbstein, in examining 297 injected specimens, described their findings on the blood supply to the carpal navicular bone. In two-thirds of the cases, the vessels are distributed equally throughout the length of the ligamentous ridge. In 13% of the cases, no vessels directly enter the proximal half; and in 20%, there is a scanty vascular supply to the proximal half.

When any bone is fractured, the blood supply to the fragments may be interrupted temporarily. This is particularly true of the carpal bones, especially the carpal navicular bone in those cases in which no vessels enter the proximal half. If the fracture line is proximal to that area, then nutrition to the proximal fragment may be interrupted. Such interference with the blood supply to the proximal fragment explains the aseptic necrosis of this fragment in a large percentage of fractures of the carpal navicular bone in the middle and proximal regions. With immediate reduction and plaster cast immobilization, the blood vessels usually are restored across the fracture line and revascularization of the proximal fragment takes place. With delayed treatment, a scar may form at the fracture site and the blood channels may be sealed off.

For studying the carpal navicular bone, it often is convenient to photograph both hands on the same plate. In a suspected fracture of the carpal navicular bone, three routine views should be taken: The P.A., the lateral, and the oblique. The P.A. view should be taken with hand in extreme ulnar deviation. The oblique view should be taken to bring the carpal navicular bone into full profile.

At times, a recent fracture may be so impacted or so slight that the fracture line is not evident on initial examination even with repeat films. In these cases, if a fracture of the carpal navicular bone is suspected — and this point cannot be stressed too strongly — the wrist should be properly immobilized in a plaster cast and repeat films taken in three weeks, at which time absorption at the fracture line may be visible. This is excellent treatment for a sprain and if a fracture of the carpal navicular bone is present, valuable time has not been lost.

Characteristically, fractures of the carpal navicular bone occur in the young adult male. According to Burnett, 94% of fractures of the carpal navicular bone occur in males and 60% occur in the below 30 age group.

Usually, acute dorsiflexion and sharp radial

*Attending Surgeon, Cook County Hospital.
†Orthopedic Resident, Cook County Hosiptal.
Read before the Joint Meeting of the Chicago Chapter of the American College of Surgeons and the Chicago Orthopaedic Society on September 22, 1955.

deviation of the wrist produces the injury. The force is applied indirectly to the carpal navicular bone through the index and middle metacarpal bones. Occasionally, it may occur directly to the tubercle of the carpal navicular bone as happens with a fall on the outstretched hand in ulnar deviation.

The symptom of fracture of the carpal navicular bone is pain in the radial aspect of the wrist. The physical signs are moderate swelling over the radial side of the wrist and tenderness over the "snuffbox" area. The hand grip frequently is weakened and with the hand radially deviated, percussion of the index metacarpal elicits pain over the "snuffbox" area.

Fractures of the carpal navicular bone occur in three main locations: 75% at the wrist or central part, 15% at the junction of the proximal and middle third, and 10% at the tubercle.

All fresh fractures of the carpal navicular bone should be immobilized at once in a circular plaster cast extending from the upper third of the forearm to the distal phalanx of the thumb and to the distal palmar crease of the hand. Usually, because of pain and swelling, only minimal dorsiflexion of the wrist may be obtained at the initial casting. But at 10 days or two weeks, the wrist can be immobilized in a circular plaster cast in a position of 30 degrees of dorsiflexion and 15 degrees of radial deviation. The fracture should be immobilized until X-rays reveal trabeculae across the fracture site. Rarely is this achieved in less than eight weeks. If necessary, immobilization should be maintained for four to six months and even longer.

In cases of a fracture in the very proximal portion of the carpal navicular bone, it often is better to excise the fragment than to immobilize and wait for healing.

Fractures of the tubercle of the carpal navicular bone almost always heal. This type of fracture is largely extra-articular and the blood supply to both fragments is maintained.

The comminuted fracture of the carpal navicular bone might be treated by primary excision of the entire bone. But unless there is great displacement it probably is better to immobilize the fracture the required time and do the excision later if symptoms justify it. The comminuted and displaced fragments may create abnormal friction with the surrounding carpal bones and the radius and lead to traumatic arthritis.

To accentuate the need for early diagnosis and proper immobilization, let us consider the case of a 22 year old male laborer who fell on his outstretched right hand on January 1, 1955. He had immediate wrist pain and visited a physician that afternoon. Mild swelling over the dorsum of the wrist, tenderness over the "snuffbox" area, and a positive percussion test pointed to the diagnosis of a fracture of the carpal navicular bone. This was confirmed by X-rays. The wrist was improperly immobilized in a neutral position with 5 degrees of ulnar deviation for six weeks. Proper immobilization was instituted with the wrist in 30 degrees of dorsiflexion and 15 degrees of radial deviation. Six months from the original injury, the fracture was not healed. X-rays at eight months were suggestive of trabeculae across the fracture site but healing was not complete. Early proper immobilization might have resulted in early healing for this young man.

A second case is that of a 43 year old laborer who fell on his outstretched hand, had pain in his wrist, and was told that he had a wrist sprain. Three months later, a second fall resulted in sharp wrist pain and he again visited a physician. X-rays revealed an old fracture of the proximal pole of the carpal navicular bone with nonunion at the fracture site and cystic changes of the proximal and distal fragments. The wrist was acutely painful and had limited motion. Had the original fracture been diagnosed, proper immobilization might have prevented this cystic degeneration and nonunion. Packing of a large cyst of this nature with cancellous bone has been advocated. However, it is our feeling that excision of the entire carpal navicular bone is preferable.

This again emphasized the need for early diagnosis and proper immobilization of fractures of the carpal navicular bone.

SUMMARY

We have reviewed the anatomy of the carpal navicular bone and have discussed the mechanism of injury to this bone.

We have seen how early diagnosis can be made from the history, the physical findings, and proper X-ray evaluation.

Preferred treatment consists in maintaining

the wrist immobilized in a circular plaster cast in a position of 30 degrees of dorsiflexion and 15 degrees of radial deviation until the fracture is healed.

Finally, two cases were shown in which the failure either to correctly diagnose fracture of the carpal navicular bone or to properly immobilize fracture of a carpal navicular bone resulted in prolonged and unnecessary morbidity.

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Public welfare

From the vantage point of today, the Commission also believes "the entry of the national government into the field of public welfare on a massive scale was clearly justified and very necessary. The stresses of the depression created burdens far beyond the fiscal capacity of the state and local governments. The social insurance programs initiated at the time are only now beginning to exert a significant ameliorating impact upon public assistance rolls." *Federal-State Relationships as Viewed by the Kestnbaum Commission. Pub. Aid in Ill. June* 1956.

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Although the new drugs are a most helpful addition to our armamentarium, they are not a substitute for the tedious but progressively successful tuberculosis control program developed painstakingly over the last half century which will lead eventually to our goal of eliminating all tuberculous infections, in other words, to the goal of no reactors to the tuberculin test. James E. Perkins, M.D., Managing Director, NTA, J. Lancet, April, 1956.

Radioiodine

At present, most doctors experienced in the field of medicine consider radioiodine the preferred treatment for thyrotoxicosis in patients above age 40 without goiter, or with diffuse goiter of a certain estimated weight, and patients of any age with persistent or recurrent postoperative symptoms of overactive thyroid. *M. D. Prescription: Atomic Cocktail. Your Radiologist. Spring* 1956.

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With the advent of the newer drugs, and the great advance in surgery of the lungs, medical progress has slowly converted tuberculosis from a killing to a chronic disease. This is a great achievement. But, in changing the course from a killing to a chronic state, tuberculosis handicaps its victims, thereby creating a huge financial and emotional problem, which eventually threatens, with its ever increasing size, to stifle the medical economy of our communities. I. Phillips Frohman, M.D., Ohio State M. J., August, 1955.

CASE REPORTS

Chlorpromazine in the Management of Psoriasis

ROBERT A. FISHER, M.D., AND JOSEPH LLOYD D'SILVA, M.D., CHICAGO

MANY theories on the etiology and pathogenesis of psoriasis have been postulated: Gruetz[1] and Gans[2] attribute it to anomalies of fat metabolism; Monash[3] to avitaminosis D; Stingily[4] to a deficiency of vitamin B12; and Ingram[5] suggests that hormonal activity may play an important part. Because the proponents of each theory advocate a different therapy, the patient has gone through a gamut of treatment from local therapy, ultraviolet radiation, and dietary regimens to gamma globulin, Aureomycin,® Terramycin,® and ACTH. Although the cause of the disorder is unknown, investigators have observed that psoriasis often is associated with or exacerbated by emotional tension. The following case histories of two psychotic patients whose long standing, generalized psoriasis cleared coincidentally with the amelioration of their psychoses suggests that the etiology of psoriasis may be largely emotional.

CASE HISTORY NO. 1

A 58 year old white female was admitted to the Chicago State Hospital in 1945, with a history of mental disorder; she was diagnosed as having dementia precox, catatonic type. Admission chest X-ray revealed pulmonary tuberculosis in the right upper lung field. She also suffered from a generalized dermatitis with well demarcated salmon-red areas diagnosed as generalized psoriasis. History of her psoriasis dates back to 1942; since then she had been treated unsuccessfully with various types of ointments and tars.

After treatment with chlorpromazine, which was started in February, 1955, she not only experienced improvement in her mental attitude, but also achieved an almost complete clearing of her skin condition. The dosage schedule necessary to alter the skin condition was much higher than her psychosis required. The following dosage regimen was adopted arbitrarily: 50 mg. t.i.d. increased daily by 100 mg. up to 900 mg. This maximum dose was maintained for three days, then reduced gradually over a period of one week to a maintenance dose of 50 mg. t.i.d. The first noticeable change in her skin condition was a diminution of generalized discomfort and itching which were allayed in three to four days. In about a week to 10 days the lesions gradually began to desquamate, leaving isolated dull red areas at their sites. Further clearing occurred during the high dosage period. Chlorpromazine was discontinued to see if the lesions would recur without therapy. Although less acute, they did recur in two to three weeks. The patient was then restarted on chlorproma-

From the Chest Service of the Chicago State Hospital, Illinois Dept. of Public Welfare.

zine with the same beneficial results.

CASE HISTORY NO. 2

A 55 year old white female was admitted to the Chicago State Hospital in 1945 with a diagnosis of schizophrenia, catatonic type. During her stay in the Chicago State Hospital she developed pulmonary tuberculosis in the right upper lung field. The patient was combative, difficult to manage, and required frequent restraint and isolation. She also suffered from a desquamating skin condition with typical localization on elbow, neck, and head, diagnosed by the consultant in dermatology as psoriasis, and treated as such with unsuccessful results. Later she was put on chlorpromazine for her psychosis, and at the same time received specific combined chemotherapy (PAS, INH, and streptomycin) for her tuberculosis. The chlorpromazine dosage was moderate; it did not exceed 200 mg. daily in divided doses. Toward the end of three weeks, not only was her mental condition dramatically improved but her skin disorder had disappeared. This patient developed jaundice of an obstructive type similar to those cases reported in the literature, accompanied by an elevation of serum bilirubin and alkaline phosphatase. Chlorpromazine was discontinued. In about three weeks the jaundice cleared and, simultaneously, typical desquamating lesions appeared on the elbow and neck similar to those observed prior to chlorpromazine therapy.

COMMENT

The fact that the psoriasis suffered by these two patients cleared while they were taking chlorpromazine and reappeared when the drug was discontinued suggests that chlorpromazine is effective, or at least helpful, in the treatment of psoriasis. These results demonstrate either that chlorpromazine is a specific treatment for psoriasis, or that psoriasis is primarily psychic in origin, and may be alleviated by reducing the patient's tension and anxiety. Ingram[5] in a review of the social and psychological background of 80 of his patients with psoriasis found emotional stress to be a potent etiological factor. It has been common to prescribe small doses of phenobarbital[6] or to employ psychotherapy[7] in the treatment of this condition.

Recently it has been brought to our attention that rauwolfia serpentina which has the same ataraxic action as chlorpromazine was beneficial in psoriasis[8]. Therefore, it appears the ataraxics are useful therapeutic adjuncts in the treatment of psoriasis. Further investigations would seem justified.

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EDITORIALS

Do as I say . . . .

Physicians might be more sympathetic toward their patients if they themselves were ill more often and in need of surgery, gastric analyses, prostatic massages, or proctoscopic examinations.

A famous surgeon of more than a quarter of a century ago routinely ordered large, postoperative proctoclyses administered at a rapid rate. His patients complained bitterly, but orders were orders. The surgeon maintained that this routine lowered the mortality rate in his cases, and it probably did. But when the surgeon in question underwent an appendectomy, his colleagues decided to give him a dose of his own medicine. Thereafter, no proctoclysis of that size and rate was administered in his hospital.

More and more laboratory tests are being introduced. It is surprising how little the average person knows about these procedures and how grateful they are for an explanation on what to expect. They have less anxiety and, in addition, mistaken ideas and erroneous beliefs are dispelled. Many laymen still think that a spinal tap is followed by months of backache and headache and occasionally by numbness, pain, or paralysis of the lower extremities.

Others are afraid of electrocution when the wires of the electrocardiogram are attached to the extremities. The cardiac who has been told to take it easy develops considerable anxiety when asked to do the Master's two-step test. Innumerable tall tales have appeared about isotopes and patients are sometimes ashamed to admit their fears about atomic diagnostic procedures. They appreciate an authoritative explanation.

There is another reason why every physician should be a patient. Some medicos are too liberal with their criticism of habits the public enjoys. This has led to a number of suggested "don'ts." Patients are told blithlely to stop smoking, drinking coffee, or overeating. The number of "don'ts" would decrease if physicians tried to break a few of their own habits or if they went on a low salt or 800 calorie diet. How many members of the profession have tried to exist on fruit juices and rice for breakfast, lunch, and dinner?

It also has been suggested that every physician use on himself the samples of medicine he receives. They might end up by being less liberal in passing out sedatives and tranquilizing agents that make a person so drowsy he doesn't care to work. It is difficult to practice medicine when confronted with this side reaction of many of these drugs yet we expect our patients to carry on normally during treatment with these "don't-give-a-damn" pills.

The best way to get information is to get it firsthand. There is one objection to physicians being patients: They might become too sympathetic and not order certain remedies and procedures even when they are necessary.

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Increasing farm accidents

In the Aug. 4, 1956 issue of the Journal of the American Medical Association, Dr. Franklin H. Top, Iowa City, pointed out that deaths from

farm accidents in 1954, totalled 14,000, a rate of 61.7 per 100,000 farm residents. Dr. Top stated that the high level of work accidents on the farm is partially due to the shift from horse-drawn to motor-driven machinery. When the farmer stopped having to rest his horses periodically, he also stopped resting himself.

In hot weather during the farming season, horses had to be rested periodically and naturally this gave a rest period for the driver. Unlike motorized farm machinery, horses cannot be used for periods of from 10 to 15 hours a day, and for a number of consecutive days. This failure to observe rest periods and the accompanying fatigue was blamed for many farm accidents.

Another factor which perhaps plays an important part in these considerations, is the difference in retiring hours on the part of the farmer today, as compared with the horse-drawn equipment days. Then, the farmer would usually retire at an early hour after his day's work was done. Today, the average farmer has radio and television in the home, and more time is devoted to some evening entertainment than was previously the case. Today he has all weather, hard surfaced roads which permit him to take his auto for evening trips.

Dr. Top stated that studies show there is a mid-morning and mid-afternoon peak period during which the majority of accidents occur. He believes a mid-morning break, like that given in many factories and offices, would be a good idea for the farmer. Carelessness in the handling of machinery and disregarding the safeguards on modern farm equipment is also a factor in the increasing farm accidents. Those of us living in farming communities have seen many farm workers lose a hand or an arm in the mechanized corn pickers each fall. Printed warnings on the equipment are disregarded, and with the machine running, too often we have seen the results of this type of carelessness.

In this report it was shown that tractor accidents account for 700 deaths a year, and many of these occur on the highways. In one recent study it was shown that approximately one-third of the tractor deaths occur on the highways.

It is obvious that much educational work is required to reduce the number of farm accidents. The Committees on Rural Health can be of much assistance through their associations with farm bureaus and other organizations.

The treatment of malignant tumors with betatron radiation

Savages explain, science investigates.

William Gull.

It is a curious fact that various forms of radiation, notably X-ray and radium emanations, of value in the treatment of some forms of malignant growths, may actually cause cancer if utilized with insufficient precautionary measures. Most of the early radiologists failed to take adequate precautions to protect themselves against the rays and many of them died of cancer. In recent years selective radiation with the isotopes of certain chemicals has been used advantageously, the use of the isotope of phosphorus in polycythemia vera being an excellent example.*

Recently two Swiss physicians, Professors H. R. Schinz of Zurich and A. Zuppinger of Bern, reported results obtained in different forms of cancer from the use of the x-ray emanations given off by the betatron.** They point out that the betatron does not emit continuous x-rays but, in correlation with phases of an alternating current, produces biologically active secondary electrons possessing greater deep penetrability than the primary rays and those given off by x-rays or radium.

Doctor Schinz irradiated 66 patients with carcinoma of the esophagus. Dramatic, more or less lasting improvement occurred in 15 over a follow-up period of 30 months. He irradiated 37 patients with bronchial carcinoma of whom 17 obtained subjective improvement. Of 27 patients with cancer of the bladder, two of eight with inoperable lesions have survived symptom-free for two and a half years. Of 35 patients with carcinoma of the cervix uteri, 15 of whom had had a prophylactic operation, 12 have survived without symptoms. Good results were obtained also in patients with carcinoma of the body of the uterus and carcinoma of the ovary most of whom, excepting those treated prophylactically, had far-advanced inoperable lesions. Doctor Schinz claims that the betatron gives results that 200 kilovolts of irradiation could never achieve in a like period.

Doctor Zuppinger obtained excellent results in

*See Modern Medical Monographs. Polycythemia. John H. Lawrence. Grune and Stratton. New York and London, 1955.

**Letter from Switzerland. J.A.M.A., 159: 212, 1955.

brain tumors and those of the mouth, jaw, and pharynx. Even patients with cancer of the stomach benefited from the treatment. He suggested that preoperative radiation before gastric resection for carcinoma might lead to improved results.

The Swiss radiologists consider the betatron treatment a significant forward step in radiation therapy. While one must agree that their results are definitely promising, it will be necessary to follow effects on more patients and over a longer period before drawing final conclusions. There is, however, enough promise in the method to show that it is one well worth continuing investigation. *G. B.*

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How should you vote on the blue ballot Nov. 6?

One of the most important votes—to you personally—that you will ever cast will be on the separate Blue Ballot at the November 6 election on the proposed Tax Amendment to the Revenue Article of the Illinois Constitution.

Proponents of the proposed Tax or Revenue Amendment admit that it would give the legislature powers it does not now have to change the whole basis for taxation of real estate; powers it does not now have to classify tangible personal property into any number of classes so long as each such classification is "reasonable and . . . based solely on the nature and characteristics of the property . . .", and to tax or authorize local governments to tax any class (from air conditioners to surgical instruments) at any rate from zero to 100 per cent; powers it does not now have to do the same thing with intangible personal property such as stocks, bonds, and mortgages.

Proponents of the proposed Tax Amendment also admit that it would give the Illinois legislature the power to impose a flat State income tax, and to authorize the City of Chicago or other local governments to impose a flat tax on income from salaries, wages, and professional fees earned within the boundaries of the local government regardless of the place of residence of those earning the income. However, the proponents contend that the Illinois legislature has this power now, under the present Constitution.

This contention is only an opinion of lawyers advocating adoption of the Amendment. It is not a fact. It has never been passed upon by the Illinois Supreme Court. It is an opinion which is not shared by other lawyers, including legal advisors to the Mayor of Chicago according to published newspaper reports. The best evidence of the serious doubts as to the constitutionality of such flat income taxes under the present Constitution is the fact that no such legislation has even been introduced at sessions of the Illinois legislature.

Proponents of the proposed Tax or Revenue Amendment point to the fact that it expressly prohibits a graduated income tax. Under the present Constitution, a graduated income tax cannot be imposed either. The Illinois Supreme Court has so held. But, under the proposed Amendment, the proponents concede that the legislature would have clear authority to impose, and to authorize local governments to impose, a tax at one rate on income from wages, salaries, and professional fees; a tax at a different rate on corporate or business income; still different tax rates on income from stocks, from bonds, from mortgages, and from other intangibles. While the proposed Amendment would prohibit a graduated income tax in words, it would clearly make it possible to approach a graduated income tax in fact.

Although the proponents must concede that the proposed Tax Amendment would give the Illinois legislature crystal-clear powers which it either does not now have at all or which are now doubtful, they contend that we must trust our elected representatives. When we gave Congress unlimited power over income taxes by amendment to our Federal Constitution, we imposed trust in our elected Congressmen not to abuse that power. Why should we invite abuse of power by granting our elected representatives powers any broader than we must? While admittedly there are changes that would be desirable in the present Revenue Article of our Illinois Constitution, those specific changes should be made possible by specific powers given to the legislature, not by giving the legislature a blank check.

Illinois has prospered under its present Constitution. We can continue to prosper under it until it can be changed to suit the people and not the politicians. The tax climate in Illinois —State and local—is in fact one of the most favorable in the nation. Shall we keep it that way?

When F. Lee Stone, President and Harold M. Camp, Secretary of the Illinois State Medical Society presented Louis H. Bauer, President of the American Medical Education Foundation with this $164,940 check at the recent A.M.A. meeting in Chicago, Dr. Bauer described it as "the largest received from any state society since the Foundation was organized." "Largest" has two meanings in this instance.

Volume II, History of Medicine in Illinois

The Secretary's office has received a number of requests for volumes of the recently published second edition of the History of Medicine in Illinois. One county medical society recently ordered 12 copies of this book as well as a similar number of volume I, which was published in 1927 under the editorship of Dr. L. H. Zeuch. These books were presented to schools and libraries in the county.

Several physicians have order copies, as many as five in some instances, which were similarly presented to schools and libraries. The Woman's Auxiliary to the Illinois State Medical Society has a special committee to aid in the distribution of this interesting book throughout Illinois. Their most recent recommendation is incorporated in the following statement as received at the Secretary's office.

"Now is the time to think of Christmas gifts to avoid the rush that is characteristic of the season. Please include in your list Volume II of the History of Medicine in Illinois. This volume has interesting reading material which doctors particulary will appreciate. It is a lifetime gift and a memento of the inheritance of the doctors practicing medicine in Illinois today. It is a suitable gift to hospital libraries, medical students, interns, residents, practicing physicians, specialists and to laymen interested in the practice of medicine in Illinois.

"The price is $10.00 and copies may be obtained by writing to the Secretary, Illinois State Medical Society, Medical Arts Building, Monmouth, Ill."

Anyone desiring a copy of this interesting book may procure same by following the above recommendation.

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181st anniversary of the Army medical service

The Army Medical Service celebrated its 181st anniversary on July 27, 1956, with a group of 61,000 physicians, nurses, medical specialists and enlisted men. It has long pursued a vigorous research and development program in order to better safeguard the health of the American soldier. The civilian population has also benefited through this research program.

Each year the Armed Forces suffer approximately 2,000 deaths from automobile accidents plus a large number of man-days lost due to injuries. As a result of these investigations, the automobile manufacturers came up with safety door latches and seat belts made optional in many 1956 car models. Another discovery through these research programs has developed the preventive treatment of Q fever, previously seen frequently in stock handlers, slaughterhouse workers and others who come in contact with livestock.

The Army Medical Service researchers have also been aiding in the development of other discoveries which have materially improved the care of soldiers as well as our civilian population. The Service may be proud of its contributions to civilian medicine and to improvements in American health over the past 180 years.

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John R. Wolff, Chairman, Walter C. Bornemeier, Edward W. Cannady, Roland R. Cross, Jr., E. F. Dietrich, W. W. Fullerton, Edwin F. Hirsch, Frederic T. Jung, W. R. Malony, Caesar Portes, William Requarth, Frederick W. Slobe.

Emergency Treatment in Urban and Rural Communities

W. W. FULLERTON, M.D., SPARTA

IT IS generally known that from time immemorial man has become an increasingly gregarious individual — anxious to work, play and be in company with other people. The very fact of living has led to crisis such as accidents, battle wounds, births, deaths, illness and disaster. Disaster, individual or mass, is an accepted part of life and always has been. To cope with a disaster, man has always called upon his neighbors, friends and relatives; also, people have come forward spontaneously to help him. However, the complications of modern living have made a lot of difference as to when and how accidents and emergencies occur, and the manner in which they are disposed of.

There is a lot of difference today with our modern roads, automobiles, and modern medicine in contradistinction to our forefathers, not too many generations removed, when we relied upon the old horse and buggy ways of doing things. The writer wishes to take this opportunity to relate a story told by Dr. Henry Horstman of Murphysboro, a former Councilor of the Illinois State Medical Society. He related this particular instance in which he was making a house call, presumably about eight miles west of Murphysboro, and received a telephone message that someone had had his arm cut off and was bleeding profusely. The man lived eight miles from Murphysboro in an opposite direction so that the trip involved sixteen miles of travel. This occurred, probably fifty years ago. He telephoned his office or home and advised them that he would have to have a change of horses and to have the other rig and other team hitched. He drove the team that he was using at a gallop into Murphysboro, changed horses, and galloped eight miles again with a new team. The emergency was not an amputation of an arm as he had been led to believe, but an amputation of a thumb, and some intelligent farmer had finally applied pressure to the bleeding appendage and the bleeding had stopped. This story we are quite sure is not exaggerated and is being told to illustrate two points: first, even with our modern conveniences of travel and good roads, a doctor cannot always be immediately on the spot to meet the first treatment of the emergency; secondly, the necessity of some responsible layman knowing what to do until the doctor gets there.

We have come a long way in educating various crews, and particularly in industry, in the handling of emergencies. The power companies, with their high-voltage lines with which they work daily, have intensive courses in first aid treatment, particularly in artificial respiration, and

some of these crews are extremely well trained. The powermen do not give up on these electrocutions. There is one industry which, although needing a lot af training today, is much better prepared emotionally and much more alert to emergencies than it used to be; this is the farm group. It has become a necessity, almost for their survival, to learn something about the general rules of safety. Farming has, of all vocations in the short period of some twenty-five or thirty years, gone through a transition from horse power to electrical and motor power. The little farmer practically does not exist anymore. Farming is practically a mechanized industry in itself. However, it is still the individual farmer who is the boss and laborer, and it is in this group that we perhaps need to encourage more training and more first aid, with more emphasis paid to safety devices and safety precautions.

Industry as a whole has become one complicated and mechanized city within itself. Industries large enough employ surgeons or have arrangements with trained industrial surgeons to take care of their injured; as well as a bevy of nurses and crews trained in first aid. Some of this has been the demand of labor organizations, and some has been due to the foresight of the industry itself and the safety expert in industry. Most large industries have a department whose business it is to be on the lookout for safety devices and to promote and arrange for first aid training.

The inclination of doctors to locate in the large communities and their tendency toward specialization has led some of the rural communities to be short of medical personnel in time of emergency. However, this is probably stressed too much. The actual lack of professional coverage is exaggerated by the public press and individuals, labor unions, and industrial management. When an emergency arises and help is needed, it is expected to get an immediate response from the medical personnel. However, as mentioned above, the training of first aid units is a necessity to offset any delay that may occur as a result of a late-arriving doctor. There are probably no doctors anywhere who can be absolutely ready to jump at the first minute of the reception of a call of emergency. Furthermore, every doctor who is located in a rural community or even in an urban community, even though he may be a specialist, should make provision in his office to handle emergency treatment with efficiency. Even if he is a specialist there are many emergencies that come up that can well use the efforts of a specialist, as sometimes no one else is available.

Therefore, in order to alleviate some of the embarrassment that might befall the injured and the professional people responsible for taking care of them, the training of lay personnel in safe first aid methods is a necessity and we will mention a few of them: (A) The power companies, which for all practical purposes and for the type of emergencies they are apt to receive, are probably ahead of all other industries. (B) The fire department should have, and most of them do have within their training periods, carefully skilled members trained in the art and use of all of the safety and first aid devices, and carry much first aid equipment with them on their runs. However, fire departments in the rural areas are often volunteer men, and it is probably prerogative that more stress should be placed on the training of these volunteers. (C) Farm education: It is characteristic of farmers and their neighbors to work together more or less in neighborhood groups. These various neighborhood groups should be encouraged through their health improvement associations to have their own individual first aid teams and all of them should be given general instructions as to safety devices. (D) Most ambulances, even in rural communities, have oxygen equipment but too often they don't know how to use it or the equipment is not in working condition. What to do in the case of emergency? What to do before the doctor arrives? Ambulances should be provided with oxygen equipment which is in working order. (E) Mine operations is another industry which has stressed safety for many years and as a general rule they have their first aid teams pretty well developed. However, their type of disasters are sometimes beyond the scope of lay personnel and lay comprehension. Therefore, in coal mine areas when an emergency call comes from a coal mine it is almost imperative that the physician answer that call as quickly as possible. (F) It has already been mentioned that many large industries have a department of safety personnel. However, in some of the smaller industries there is still a lag in the

development of training of people responsible for handling first aid intelligently. (G) Police and highway patrolmen: It is quite obvious that much first aid care is needed in our highway accidents. It is hard, and almost an imposition to ask police and the highway patrolmen to assume the responsibility of first aid when they are called to the scene of an accident. It is their job to patrol the area, police the area and protect the victim from well-wishers, curiosity seekers and the control of traffic in order to avoid further hazards. However, there is a definite lack of first aid training and in the management of highway accidents. There is a further need of coordinated effort between the civil defense people and the various component and first aid teams of industry, the public at large and our police departments.

Insurance companies would profit immensely if they would get together and help in the development of first aid teams in general throughtout rural areas. There needs to be a professional adjustment of attitudes in the medical profession as a whole to the need of improvement in the first aid care of the injured, particularly of the highways. Therefore, it is quite obvious, if we are to improve the care of the emergencies in the rural and urban communities, there must be professional leadership. This can be accomplished: First, as a part of the school program to train our children, especially our high school children, in the simple rules of first aid. Second, it can be accomplished in the Boy and Girl Scout work. Third, those of us who have industrial connections should help industry. Fourth, those of us who live in rural communities and farm areas and those of us who belong to the Farm Bureau Association can work with them and through the efforts of the Health Improvement Association develop first aid teams in the various farm units and home bureau units and set up teams for emergency care. Fifth, local hospital coordination is needed, a first aid room with a first aid kit equipped with materials and supplies for emergency care of almost any conceivable emergency, from snake bites to cardiac; and someone to check that these emergency chests are always in working order and stocked. Sixth, there should be a local physicians' roster for emergency, and the doctor taking his turn on emergency care should always be available for emergency work and the public should know how to contact him; and for him to be reminded a week or two in advance that his week is coming up so that he will not plan to be out of town or have his time committed so that he cannot do his turn of emergency care. Seventh, encourage Red Cross first-aid training. Eight, wider use of safety devices in automobile construction.

We also want to take this opportunity to make some comment in reference to our rising national death toll on the nation's highways. There are a lot of figures quoted and a lot of excuses made and a lot of figures as to what the primary factors are involved in highway accidents. Many lead to death and many people are permanently disabled following them. It seems as though the medical profession has not taken much professional leadership in trying to solve this problem. There should be initiated some understanding of what careless driving consists of. Speed is not always a problem, but speed injudiciously used is a problem. The open highways often appear to be an inviting racetrack. However, all highways have country roads from which a vehicle may approach and inadvertently come upon the highway without stopping to look or listen. Small towns have living individuals in them, just as much as large communities and no residential area, regardless of whether or not it is incorporated, should suffer from a race track of speed-crazy drivers. The State of Illinois, particularly, needs to stress more strongly the prosecution and handling of drivers under the influence of alcohol. True enough, someone having had one or two drinks is not necessarily drunk; however, a change in the terminology applied to the individual involved in a traffic violation or a highway accident is needed. Drivers are brought into a physician and the decision "is he drunk or is he not drunk" is requested, but this is not a very good classification of the degrees of alcoholism. The law probably should say specifically that if there has been one drink taken before a traffic violation, regardless of what the violation is, there should be a good stiff fine.

A second category could be someone not necessarily drunk, but definitely under the influence of intoxicating liquors; his fine should be proportionately heavier, still not labeling the man as intoxicated and, thirdly, the classification of the drunk which can be confirmed either by behaviour patterns or definite laboratory findings.

There should be a closer correlation between speed and alcoholism and emphasis made on fines assessed and punishment applied to the alcoholic whether he has been involved in an accident or not and particularly so if he has been involved in a fatal accident. Some states have laws in which if the driver has been known to have taken any drinks he is automatically subject to a fine regardless of whether or not any accident or violation has occurred. This would have a tendency to induce parties to see that at least one of their members, the driver, did no drinking. There is another thing that needs to be done in Illinois and that is to take the highway patrolman's position completely out of politics; provide a training school for the men who do the police patrol work and guarantee them a job which will not change with every political change that comes along; with opportunities for promotion; opportunities for increase in pay according to the service they render. A police system on the basis of political merit, rather than ability, is not an adequate police system. Proper policing of our nations highways with authority of the patrolman to act and more enforcement of speed laws and enforcement of regulations concerning reckless and inconsiderate driving will do much to reduce our nation's highway death toll and help to reduce the need of emergency treatment in urban and rural communities.

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What's the diagnosis?

The Blue Cross files contain some interesting material, the instance forming the basis of this report being an example. No inference is made, the report being submitted because it is believed that it will be of interest to the profession.

Between January 3, 1955 and May 9, 1956, a female Blue Cross member, married, age 36, was admitted to the same hospital 26 times. Total cost to Blue Cross was $3512.00. The following summary includes the length of stay, procedures performed and the diagnosis for each admission:

Admission Date	Length of Stay	Diagnosis and Procedure
1-3-55	7 day stay	Cholecystitis
1-14-55	15 day stay	Cholecystitis (chronic)—cholecystectomy
2-1-55	7 day stay	Acute hepatitis
2-18-55	5 day stay	Strictures right ureter—cystoscopy and dilatation right ureter
3-18-55	5 day stay	Stenosis and kink of right ureter
3-25-55	5 day stay	Renal colic due to stricture of right ureter—cystoscopy
4-7-55	27 day stay	Cystic ovaries—fibrous uterus—adhesions; total hysterectomy—bilateral oophorectomy
5-16-55	7 day stay	Postoperative bleeding with pain in left side of pelvis plus right ureter stricture and kink
5-24-55	6 day stay	Kink in the right ureter
6-5-55	11 day stay	Postoperative hematoma following hysterectomy—ureteral colic
6-17-55	12 day stay	Contusion and sprain left hip
7-5-55	5 day stay	Renal colic—cystoscopy; influenza
8-7-55	2 day stay	Renal colic—stricture and kink right ureter
9-16-55	6 day stay	Renal colic—stricture right ureter—cystoscopy
11-7-55	6 day stay	Renal colic—stricture and kink right ureter—cystoscopy
11-25-55	6 day stay	Renal colic—stricture and kink right ureter
12-6-55	8 day stay	Lysis of adhesions
12-28-55	7 day stay	Cardiospasm
1-5-56	18 day stay	Pylorospasm
2-2-56	5 day stay	Acute gastritis
3-3-56	5 day stay	Influenza
3-15-56	3 day stay	Acute tonsillitis—acute cystitis
3-23-56	5 day stay	Acute cystitis
3-31-56	6 day stay	Acute cystitis
4-10-56	2 day stay	Postoperative check; cystoscopy and retrograde pyelogram
5-9-56	5 day stay	Acute gastroenteritis

CORRESPONDENCE

North Shore Health Resort lecture series

We are happy to anounce the Seventh Annual North Shore Health Resort Lecture Series for the 1956-57 season. The theme is The Medical Practitioner's Contributions Toward Healthy Emotional Development.

As in the past, the lectures are presented as a public service to the physicians of the Chicago area on the first Wednesday of each month (except January and May) at the hospital, 225 Sheridan Road in Winnetka, Illinois at 8:00 p.m.

The J. B. Lippincott Company has agreed to publish this series as a book in 1957. The Board of Directors of the North Shore Health Resort and the individual authors have assigned all royalties from the sale of this book to the American Psychiatric Association. The American Academy of General Practice will again give its members credit for attendance at these lectures. All physicians and allied professional personnel are cordially invited to attend. The program follows.

Oct. 3, 1956. The Unique Position of the Physician in Our Society. Daniel Blain, M.D., Medical Director, American Psychiatric Ass'n., Clin. Prof. of Psychiatry, Georgetown Univ.; Consultant, Vet. Adm.; Member, Expert Committee on Mental Health of the W. H. O.

Nov. 7, 1956. The Psychological Preparation of the Individual for Medical and Surgical Care. Milton Rosenbaum, M.D., Professor and Chairman, Department of Psychiatry, Albert Einstein Col. of Med.; Dir. Psych. Services, Bronx Municipal Hosp. Center; Chair. Com. on Medical Education, A. P. A.

Dec. 5, 1956. Problems of Early Development. Lauretta Bender, M.D., Prof. Clin. Psychiatry, New York Col. of Med.; Principle Research Scientist in Child Psychiatry, Dept. of Mental Hygiene, State of New York.

Jan. 9, 1957 (Second Wed.). Problems of the School Child. Ralph D. Rabinovitch, M.D., Director, Hawthorne Center, Consultant in Child Psychiatry, State Department of Mental Health, Northville, Michigan.

Feb. 6, 1957. Problems of Teenagers. Frederick H. Allen, M.D., Director, Philadelphia Child Guidance Center; Clin. Prof. Psych., U. of Penn.; Pres. Amer. Acad. of Child Psych.; Past Pres., Inter. Ass'n. of Child Psychiatry.

Mar. 6, 1957. Problems of Adulthood. C. Knight Aldrich, M.D., Professor and Chairman, Department of Psychiatry, University of Chicago School of Medicine.

Apr. 3, 1957. Premarital Counseling. Emily H. Mudd, Ph.D., Director, Marriage Council of Philadelphia; Ass't. Prof. Family Study, Dept. of Psych., School of Med., U. of Penn.

May 8, 1957 (Second Wed.). Marriage Counseling. Robert W. Laidlaw, M.D., Chief, Div. of Psychiatry, The Roosevelt Hosp., Past Pres. Amer. Acad. of Marriage Counselors.

June 5, 1957. Problems of Grandparents. Erich Lindemann, M.D., Professor of Psychiatry, Harvard Medical School, Psychiatrist-in-Chief, Mass. Gen. Hosp.; Medical Director, Human Relations Service, Inc.

Samuel Liebman, M.D., Medical Director.

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Clinics for crippled children listed for October

Twenty clinics for Illinois' physically handicapped children have been scheduled for October by the University of Illinois Division of Services for Crippled Children. The Division will count 14 general clinics providing diagnostic ortho-

pedic, pediatric, speech and hearing examination along with medical social and nursing service. There will be 3 special clinics for children with cardiac conditions, 2 for children with rheumatic fever and 1 for cerebral palsied children.

Clinics are held by the Division in cooperation with local medical and health organizations, both public and private. Clinicians are selected among private physicians who are certified Board members. Any private physician may refer to or bring to a convenient clinic any child or children for whom he may want examination or may want to receive consultative services.

The October clinics are:

October 2 - Quincy, Blessing Hospital

October 3 - Hinsdale, Hinsdale Sanitarium

October 9 - E. St. Louis, Christian Welfare Hospital

October 9 - Peoria, Children's Hospital

October 11 - Cairo, Public Health Building

October 11 - Elmhurst Cardiac, Memorial Hospital of DuPage County

October 11 - Springfield, St. John's Hospital

October 12 - Chicago Heights Cardiac, St. James Hospital

October 16 - Danville, Lake View Hospital

October 17 - Alton (Rheumatic Fever), Alton Memorial Hospital

October 17 - Chicago Heights General, St. James Hospital

October 18 - Flora, Clay County Hospital

October 18 - Rockford, St. Anthony's Hospital

October 23 - Peoria, Children's Hospital

October 24 - Elgin, Sherman Hospital

October 24 - Springfield (Cerebral Palsy), Memorial Hospital

October 25 - Bloomington (A.M.-General, P.M.-Cerebral Palsy) St. Joseph's Hospital

October 25 - Mt. Vernon, Masonic Temple

October 26 - Chicago Heights Cardiac, St. James Hospital

October 30 - Effingham (Rheumatic Fever), St. Anthony's Hospital

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The use of the tranquilizing drugs, chlorpromazine and reserpine, has increased the number of discharges of former chronically ill mental patients by 36 per cent in a Massachusetts VA hospital.

Fall Conference of the Woman's Auxiliary

for

County Presidents, Presidents-Elect, Officers and Committee Chairmen

Members and Guests are cordially invited to attend

October 25-26, 1956

Chicago

Sheraton-Blackstone Hotel

Thursday, October 25

a.m.

8:30-10:00

Registration .....Crystal Ballroom

9:30

Call to Order ....Mrs. Nicholas G. Chester, Chairman of the Conference

Auxiliary Pledge ..Mrs. James P. Simonds

Welcome .....Mrs. Matthew E. Uznanski

Response .....Mrs. Neal D. Crawford

Greetings ...F. Lee Stone, M.D., President Illinois State Medical Society

Introduction of National President .... Mrs. Robert E. Dunlevy

Introduction of National President .... Mrs. Robert Flanders

Program

10:00

Public Relations .....Mr. Leo E. Brown

Rural Health .....Harlan English, M.D.

Legislation .....Mr. Walter L. Oblinger

"History of Medicine in Illinois" .... James H. Hutton, M.D.

Mental Health ....F. Garm Norbury, M.D.

Safety...Speaker, National Safety Council

Luncheon, Mayfair Room

Guest Speaker ....Mr. Henry Viscardi, Jr.

Friday, October 26

10:00

Panel Discussions .....Crystal Ballroom

Presiding .....Mrs. Fred C. Endres, Co-chairman of the Conference

Participating .....County Presidents

12:00 noon

Adjournment .....

p.m.

1:30

Board of Directors Meeting .....Ivy Room

To headline annual fall conference

On October 25th, 1956, the Woman's Auxiliary, during their Fall Conference at the Sheraton-Blackstone Hotel, proudly presents an outstanding speaker in the field of rehabilitation, Mr. Henry Viscardi, Jr. Coming to Chicago from West Hempstead, New York, Mr. Viscardi, a member of the President's Special Committee on Rehabilitation, will present his story of what has been accomplished in this important field.

'Hank' Viscardi, born legless, has devoted the greater number of his forty four years to bring dignity to those suffering severe disabilities. His recent testimony before the Senate inquiries on Pensions for the Disabled gives further proof to his philosphy, "Think only of a man's ABILITY, not his DISABILITIES." He insists, "Instead of parades, pensions, and pity, handicapped people want the opportunity to live productive lives, and to support their families in dignity." Although severely handicapped himself, Mr. Viscardi testified against pensions and support by federal aid.

During World War II, after having been rejected by the Armed Services, Hank Viscardi volunteered, and was finally accepted by the American Red Cross, after amazing those who observed his ability to drill, and keep up with those not handicapped in any way. During these years, as a member of the Red Cross, Mr. Viscardi was sent to many veteran's hospitals throughout the United States to help rehabilitate those who had lost their limbs during the War. In keeping with his promise to Dr. Robert R. Yanover, the surgeon who had performed countless operations on Hank Viscardi, he relinquished an extremely well paying position with the Burlington Mills, in 1947 to head JOB. JOB [JUST ONE BREAK] was formed with Bernard M. Baruch, Bernard F. Gimbel, Eleanor Roosevelt, and many other notables, to find employment for the handicapped. It was part of the New York University-Bellevue Institute of Physical Medicine and Rehabilitation. When accepting this important position as director of JOB from Colonel Howard A. Rusk, Hank Viscardi was fulfilling his word to dedicate his life to helping others, which is the promise he gave to Dr. Yanover, as payment for his services. In the doctor's own words, he said in refusing medical payments for his surgical services to Mr. Viscardi, "There is no bill Hank, but someday when you get the chance, do something to help other cripples. Then our account will be settled." Not satisfied to just head the important post with JOB, Hank Viscardi started his own electronics firm, producing important war materials for the Korean War. This company began with four men, who, between them had seven arms and one leg. Today, this firm called ABILITIES, INC. employs almost two hundred persons, all severely handicapped. Mr. Viscardi is married to the former Lucille Darracq, and is the father of four daughters.

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Officers of the Illinois Trudeau Society

At the annual meeting of the Illinois Trudeau Society held in Springfield, the following officers were elected for the fiscal year.

Ernest Teller, M.D., President, Chicago; George H. Vernon, M.D., President-Elect, Edwardsville; Karl H. Pfuetze, M.D., Secretary-Treasurer, Chicago.

Dr. Teller is in charge of tuberculosis control, Illinois Department of Welfare. Dr. Vernon is Medical Director and Superintendent of the Madison County Tuberculosis Sanatorium. Dr. Pfuetze is Medical Director and Superintendent of the Chicago State Tuberculosis Sanitarium.

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American Fracture Association meeting

The 1956 annual meeting of the American Fracture Association will be held at the Drake Hotel, Chicago, November 29, 30, and December 1. The Association has also scheduled an instruction course in fractures in conjunction with the Cook County Postgraduate School to be held on the day preceding the opening day of the meeting.

Complete programs and information concerning the Fracture Association meeting may be procured from the Secretary-General, H. W. Wellmerling, 610 Griesheim Building, Bloomington, Illinois.

A letter to student nurses

This letter may prove to be the most important you have ever received! So, please read it carefully. If it is not of interest to you personally, it may be of vital importance to some relative friend or neighbor.

The current academic year of most nursing schools will shortly end. For those who will be graduating, important decisions must be made regarding plans either for immediate employment or for graduate training in your chosen profession.

If you are seeking employment, the Department of Public Welfare has many interesting and challenging opportunities open for you. If you are considering graduate training, the enclosed announcement could change your life.

For student nurses entering their junior or senior year this fall, there are new responsibilities and obligations which will demand your attention shortly.

Therefore, we want to advise all of you who will be senior and junior students that there are a limited number of scholarships available to assist you in finishing your training right in your present school of nursing, if it is an approved school.

We are enclosing an announcement of signal value to all student nurses in basic training, outlining our scholarship plan, its benefits and opportunities. Study it carefully and pass it on to someone else interested in nursing.

If any of the opportunities which are offered appeal to you, please write at once for full details and information.

Sincerely yours,
Otto L. Bettag, M.D.
Director

Special Announcement For Student Nurses And Graduate Nurses In Illinois

The 69th General Assembly passed and Governor William G. Stratton signed a Bill last summer making funds available for Nursing School Scholarships through the Illinois Department of Public Welfare.

Approximately 200 scholarships will be awarded for the fall term of 1956 in the field of basic nurses training. Training grants with liberal monthly stipends are also available for graduate nurses to continue their training toward either the bachelor's or master's degrees.

Special Scholarship Report As Of August 1, 1956

As of August 1, 1956—the major portion of the scholarships available for basic nurses training have been awarded—*however, special consideration will be given any applications by student nurses entering their junior or senior years of training in either the diploma or degree program.* A summary of the benefits and opportunities is as follows:

Senior Students—$600.00 in cash during your senior year, plus any tuition, fees, books and uniforms (Approximately 40 scholarships available for the state for students entering their senior year. Apply now! First come—first served!)

Junior Students—$1080.00 in cash during the next two years, plus tuition, fees, books and uniforms (Approximately 10 scholarships available for Illinois students entering their junior year.)

Beginning Students—$1440.00 in cash during the next three years, plus tuition, fees, books and uniforms (Extremely limited—but, a few available yet.)

Students In Degree Programs—All of the above scholarships are available for students in college or university programs of nursing during their last three years.

Your Obligation Will Be: The acceptance of employment at *full salary* as a staff nurse in one of the department of public welfare's psychiatric hospitals or schools (on civil service status, with all rights, privileges and opportunities of same) on a basis of one year of employment for each year in school on the scholarship.

Attention—All Graduate Nurses

Special training grants are currently available for graduate nurses to continue their training toward either the bachelor's or master's degrees. All applications from qualified graduate nurses will be considered by the department of public welfare. (Fields of study for which these grants are available include psychiatric nursing, nursing administration and nursing education.)

Benefits Include: $175.00 a month stipend, with an additional $15.00 for each unemployed dependent up to a maximum of $235.00; plus tuition and academic fees in the fully accredited college or university of your choice in the United States; travel expenses for one round trip from your home to the school permitted each year.

For full details or further information—write or call Nursing Service, Illinois Department of Public Welfare, 403 State Office Building, 400 South Spring Street, Springfield, Illinois, phone: Springfield 6611—Ext. 464; 1500 State of Illinois Building, 160 North LaSalle Street, Chicago 1, Illinois, FInancial 6-2000-Ext. 624, 625.

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University of Michigan Alumni Conference

More than 600 medical alumni of the University of Michigan Medical School will meet in Ann Arbor, September 27-29 for their Triennial Medical Alumni Conference. A special program of scientific presentations, panels, and clinics will highlight the scientific portion of the program, while a banquet, special convocation of the U-M Medical School, and the Michigan-UCLA football game will feature the pleasure side.

Th sixth such conference of its kind since 1938, Dean A. C. Furstenberg of the U-M Medical School cordially invites every Michigan Alumnus to attend. Information on housing and program reservations can be obtained by writing to A. C. Furstenberg, Dean, University of Michigan Medical School, Ann Arbor, Michigan.

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Announcement of the Van Meter Prize Award

The American Goiter Association again offers the Van Meter Prize Award of $300.00 and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The award will be made at the annual meeting of the Association which will be held in the Hotel Statler, New York, New York, May 28, 29 and 30, 1957, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations, should not exceed 3,000 words in length and must be presented in English. Duplicate typewritten copies, double spaced, should be sent to the Secretary, Dr. John C. McClintock, 149½ Washington Avenue, Albany 10, New York, not later than January 15, 1957. The committee who will review the manuscripts is composed of men well qualified to judge the merits of the competing essays.

A place will be reserved on the program of the annual meeting for the presentation of the winning essay by the author if it is possible for him to attend. The essay will be published in the annual proceedings of the Association.

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Pan-Pacific Surgical Association

The Seventh Congress of the Pan-Pacific Surcal Association will be held in Honolulu, Hawaii November 14-22, 1957. All members of the profession are cordially invited to attend and are urged to make arrangements as soon as possible if they wish to be assured of adequate facilities.

An outstanding scientific program by leading surgeons with sessions in all divisions of surgery and related fields promises to be of interest to all doctors.

Further information and brochures may be obtained by writing to Dr. F. J. Pinkerton, Director General of the Pan-Pacific Surgical Association, Room 230, Young Building, Honolulu, Hawaii.

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Recent grants to the Hektoen Institute

The Damon Runyon Memorial Fund for Cancer Research has allocated a grant of $12,000.00 to the Hektoen Institute for Medical Research of Cook County Hospital, for studies in leukemia under the direction of Dr. Steven O. Schwartz and his associates. This is the second yearly grant that the organization has given the Institute. The Department of Health, Education and Welfare, Public Health Service has granted $16,160.00 for studies on relations of timing and bacteriology of superimposed pyelonephritis in the course of chronic glomerulonephritis under bacteriologic and immunologic group A streptococcal control. This work is to be done by Drs. Daniel S. Kushner, David P. Earle, Jr., and S. Howard Armstrong, Jr.

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THE P. R. PAGE

Edward A. Uzemack, Director of Public Relations

THIS month's PR Pat-On-The-Back goes to the Chicago Medical Society for an extraordinary effort in dealing with Chicago's polio emergency.

Faced with a situation in which the city was experiencing the most severe outbreak of polio in its history, the Society's president, Dr. Karl A. Meyer, arranged a meeting of its branch presidents and past presidents with city, county and state health officials. Out of this meeting came an emergency plan for mass inoculation of all children under the age of 20 and pregnant women.

Members of the Chicago Medical Society were asked to urge their respective hospitals to set up special polio clinics where the inoculations could be given free of change. The physicians agreed to contribute their services. It was estimated that approximately 500,000 persons had to be inoculated before mid-August.

Sixty-four Chicago area hospitals agreed to participate in the CMS-inspired program and the first clinics were in operation four days after the meeting. The polio vaccine was obtained from the Chicago Health Department and extra supplies of needles and syringes were provided by the Cook County Chapter of the National Foundation for Infantile Paralysis. The Woman's Auxiliary to the Chicago Medical Society, the Red Cross and the National Foundation supplied much voluntary clerical help for the necessary record-keeping.

The Illinois State Medical Society's public relations director was commissioned to handle the publicity for the campaign, and staff members of the ISMS Chicago office pitched in by keeping daily tabulation of inoculations at each of the hospitals. All radio and television stations in the area were asked to carry a spot announcement which urged parents to call the CMS and ISMS headquarters for information on where there was a free polio clinic nearest their homes. The city's newspapers carried a complete listing of the hospitals for several days and a special "box" with the telephone numbers of the state and county medical societies.

In the first two weeks of operation, more than 175,000 youngsters and pregnant women were inoculated under the CMS program.

Favorable editorial comment in the Chicago newspapers resulted almost immediately. The members of the Chicago Medical Society also received praise for a good piece of public relations work in the Secretary's Letter of the American Medical Association. This is the type of activity by a medical organization that the public will remember favorably for a long time to come.

PR GRAFS—

The American Medical Association's new 30-minute color movie, "The Case of the Doubting Doctor," is now available for use by county medi-

cal societies. The 16 mm film is designed to acquaint physicians with the services and activities of their national organization. County societies can arrange to borrow this film by writing directly to the AMA Film Library, 535 North Dearborn Street, Chicago 10, Illinois, or to the ISMS Public Relations Director, 185 North Wabash Avenue, Chicago 1, Illinois. . . At a Public Relations Workshop at Utica College, N. Y., Professor Scott M. Cutlip of the University of Wisconsin declared: "Too much of today's PR thinking and practice puts the emphasis on telling the people, getting the people to understand us and our problems . . . far too little effort is made to understand the public—its ideas, its needs and its aspirations . . . Before there can be rapport, there must be empathy."

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Tests for viruses

These are exciting days for the application of diagnostic methods to virus diseases, and the period is comparable to 40 or 50 years ago, when new bacteria were constantly being discovered. The etiology of many diseases was then clarified by the introduction of new methods for studying the morphology and cultural appearances of bacteria. In virology today, the introduction of new methods is having a similar effect and we are witnessing advances without parallel in the history of the subject. Foremost among these diagnostic methods are the new techniques of tissue culture, which are rendering obsolete the time-honored methods of isolating viruses by inoculation of eggs and animals. Tissue cultures are particularly suitable for this purpose because they are sensitive to a wide range of viruses. The tissues and other materials can be obtained readily from human operation material or from monkeys, and many ingredients can be obtained commercially. When viruses grow in the cells of tissue cultures, they produce a characteristic degeneration, or cytopathogenic change. Other lesions include the formation of giant cells and nuclear or cytoplasmic inclusions. The finding of such changes enables the virologist to offer a presumptive diagnosis based on recovery of virus from pathologic specimens. The responsibility of deciding whether this virus is the cause of the current illness falls on the attending physician. The isolation of diphtheria bacilli from a throat swab, for example, does not necessarily mean that the patient is suffering from acute diphtheria; he may only be a carrier. In the same way, the isolation of polio virus from a stool of a sick child does not necessarily signify acute polio. However, in the presence of a consistent clinical picture, virus isolation affords strong presumptive proof of the accuracy of the clinical diagnosis. Serologic tests on acute and convalescent sera still occupy an important place, especially in research studies and in the investigation of new diseases. A fourfold or greater increase in neutralizing or complement fixing antibody indicates that the virus has proliferated to a considerable extent, and probably is, therefore, responsible for the current illness. *A. J. Rhodes, M.D. Recent Advances in the Laboratory Diagnosis of Virus Infections. Ann. Int. Med. July* 1956.

AT THE EDITOR'S DESK

Atomic medicine comes into the cigarette-lung cancer picture. The radioactive content of the tobacco ash is now being blamed.

Estrogenic substances will be recommended shortly for treating male infertility. The rationale can be likened to a rebound phenomenon. The estrogens cause marked depression of spermatogenesis but "there was a surprising resurgence of sperm output when treatment was withdrawn." An improvement in sperm count occurred in 19 out of 24 patients; eight pregnancies resulted and the wife of one patient had two miscarriages.

The stopped heart operation is a revolutionary technique. If successful, it should benefit many of the 50,000 children born annually with malformed hearts. It involves the use of a heart-lung machine but it is tricky "like repairing an automobile engine while it is running."

In the new drug department, we have Preludin, an entirely new synthetic sympathomimetic antiobesity compound. According to Geigy Pharmaceuticals, the product does not destroy the patient's normal relish for food but causes earlier satisfaction of appetite with lesser caloric intake. The manufacturer claims that Preludin combats fatigue without leading to such side effects as palpitation, jumpiness, and insomnia.

Placquenil, a new [Winthrop] antimalarial compound, was found effective in three forms of lupus erythematosus.

Mikedimide made its debut as an effective barbiturate antagonist. According to a release from the Panray Corporation, it restores the patient "quickly and safely from the anesthetized to the wakeful state." In the field of veterinarian medicine "Mikedimide promises to fill the need for the product than can control barbituate anesthesia, hasten ambulation of the animal after surgery, and thereby avoid many secondary respiratory and circulatory complications."

Hoffman-La Roche Inc. has come out with a multivitamin cream (Tashan) for the relief of irritation, pain, and itching in a variety of skin disorders ranging from prickly heat to detergent rash.

The largest single allotment of polio vaccine passed out by the Public Health Service was made in June when a total of 17,172,396 cc. was released. By this time, it is estimated that in all close to 85,000,000 cc. will have been released.

There was excitement in another section of the Health, Education, and Welfare Department. In June, the Food and Drug Administration, through federal court seizures, removed nearly 200 tons of unfit food from the market. Ten tons consisted of beans contaminated with a fluorine rat poison; the rest was filthy and decomposed. An additional ten tons of food were seized to protect the consumer's pocketbook.

The Franklin Hospital Equipment Company has a new tilt bed. It is adjustable from 10 degrees Trendelenberg through full standing (90 degrees) plus all the standard hospital bed positions and adjustments.

NEWS of the STATE

ADAMS

Twenty-Five Years as Health Officer.—Dr. Harry O. Collins recently completed twenty-five years as health officer, first of the city of Quincy and subsequently of Adams County when the two merged, the Quincy-Herald Whig reported July 15. In his fifty-ninth year of active practice as a physician, Dr. Collings became health officer of the Quincy Public Health District in June 1931 and became director of the entire county health program when the Quincy unit merged with the Adams County Health Department in April 1948. Since 1914, Dr. Collins has been a member of the staff of St. Mary Hospital, becoming president of the staff in 1943. He served as president of the Adams County Medical Society in 1942.

CHAMPAIGN

Physician Wins Essay Award.—Dr. Martin A. Seidell, a member of the internal medicine staff, Carle Hospital Clinic, Urbana, has been named first place winner of the 1956 Mississippi Valley Medical Society Essay Contest for his paper entitled "A Compendium for Fluid and Electrolyte Management with Ordinary and Extraordinary Laboratory Facilities." A 1946 graduate of the Indiana University School of Medicine, Indianapolis-Bloomington, Dr. Seidell will present the paper at the twenty-first annual meeting of the valley medical society at the Hotel Morrison, Chicago, September 26-28. He will receive a gold medal, a certificate and a cash award.

COOK

Leonard Jourdonais Named Chief of Medical Department.—Dr. Leonard F. Jourdonais, Evanston, was recently named chief of the department of medicine of Evanston Hospital, effective September 1. He succeeds Dr. Lowell D. Snorf, Wilmette, who has become chief emeritus. Dr. Jourdonais, assistant professor of medicine at Northwestern University Medical School, has been a member of the Evanston Hospital staff since he graduated at Northwestern in 1933, with the exception of two years spent in residency at the New York Postgraduate Hospital.

Personal.—During a recent tour of Europe, Dr. Hans von Leden presented a series of lectures on largyngeal physiology at the Universities of Groeningen in Holland, Hamburg in Germany, Copenhagen in Denmark, Vienna in Austria, Zurich in Switzerland and London, England. On June 8 he addressed the Danish Otolaryngological Society at Copenhagen on radical surgery for cancer of the head and neck; and presented newer observations on the function of the normal larynx. On June 12, Dr. von Leden covered the same topics at a special meeting of the Austrian Otolaryngological Society. The physician is the medical director of the Voice Clinic and Voice Research Laboratory at Northwestern University Medical School.—Dr. Paul C. Bucy, neurologist, has been appointed honorary professor at the University of Minas Gerais in Belo Horizonte, Brazil, where, in 1954, he served as a visiting professor for two months.

Faculty Changes.—Dr. John L. Nickerson has been appointed chairman of the department and professor of physiology and pharmacology at The Chicago Medical School. He comes to the school from Columbia University College of Physicians and Surgeons where he was professor of physiology. Dr. Chi Kong Liu has been promoted to clinical associate in medicine at the school.

Ground Broken for Memorial Pavilion.—Ground breaking ceremonies were held, July 24, for the new $810,000 Berman and Hannah Friend Memorial Pavilion at Michael Reese Hospital. According to the Chicago Tribune, the pavilion is being constructed with a fund, now amounting to two million dollars, which was willed by Dr. Emanuel Friend, who died in 1938, for construction and maintenance of the pavilion as a memorial to his parents. The

building will contain thirty-six patient beds.

Work Started on Passavant Addition.—Ground was broken, August 2, for a $3,800,000 nine story addition to Passavant Hospital. Construction is expected to take twenty-two months. More than $3,400,000 has been raised by the hospital. The expansion will provide space for additional bed capacity, a metabolic unit, a cardiac center, an auditorium, a conference-classroom, a postoperative recovery room, a new surgical section, an improved obstetrical section, an enlarged x-ray department and a clinical laboratory, seminar rooms, an expanded laundry, and many other new units. An audiovisual nurses call system and a pneumatic tube system will increase efficiency of service to patients.

Shriners' Hospital Receives $50,000.—The Shriners' Hospital for Crippled Children was recently presented with a check for $50,000, the proceeds from this year's Shrine circus.

Chicago Participants in Anesthesia Meeting.—The Annual Meeting of The American Society of Anesthesiologists will be held in Kansas City, October 8-12, 1956. Sessions will be held in the Municipal Auditorium. Chicago participants will be Drs. E. Trier Morch on "The Safety and Dangers of Respiratory Alkalosis"; Bernard V. Wetchler and William O. McQuiston, "Anesthetic Management of Infants and Children with Double Aortic Arch"; Max S. Sadove, Reuben C. Balagot and Harry Linde, "Effect of Fluoromar Upon Certain Organ Functions".

Paul Holinger Directs Course.—A course in laryngology and bronchoesophagology will be given at the University of Illinois College of Medicine, November 5-17, 1956, under the direction of Dr. Paul H. Holinger. Registration may be made through the department of otolaryngology at the college of medicine, 1853 West Polk Street, Chicago 12, Illinois.

Postgraduate Courses.—The Chicago Medical Society is sponsoring two postgraduate courses at the Knickerbocker Hotel. The first, October 29-November 2, 1956, will be on "Modern Therapeutics" and cover the following: Hypertension, Anxiety, Choice of Surgical Operations, Antibiotics, Anti Cancer and Anti Leukemic Drugs, Dermatology, Steroids, Recent Advances in the Treatment of Selected Disorders of Metabolism and Organ Disease, and Physical Medicine. The second course, November 5-9, will be on "Practical Aspects of Endocrinology and Metabolism." This session has been broken down into the following: Diabetes, Hormones and the Male—Adrenals, Etc., Hormones and the Female, Thyroid, and Metabolism. The registration fee for each course is $75.00. Drs. John F. Sheehan and Harry F. Dowling are Co-Chairmen of the Committee on Postgraduate Medical Education of the Chicago Medical Society; other members are Drs. Wright R. Adams, S. Howard Armstrong, Jr., John O'Donoghue, Sr., Herbert Rattner, Theodore Van Dellen, Augusta Webster and Leo Zimmerman. Additional information on the courses may be obtained from the Chicago Medical Society, 86 East Randolph Street, Chicago 1; telephone: Central 6-3026.

Capps Prize Open for Chicago Medical Graduates.—The Joseph A. Capps Prize of $300 is being offered by the Institute of Medicine of Chicago for the most meritorious investigation in medicine or in the specialties of medicine. The investigation may be also in the fundamental sciences, provided the work has a definite bearing on some medical problem. Competition for 1956 is open to graduates of Chicago medical schools who completed their internship or one year of laboratory work within a period of five years prior to Jan. 1, 1956, excluding their terms of service in the Armed Forces. Manuscripts must be submitted to the Secretary of the Institute of Medicine of Chicago, 86 East Randolph Street, Chicago 1, not later than Dec. 31, 1956. The manuscript of the prize paper, as submitted, is to become the property of the Institute of Medicine of Chicago. The prize winner may be invited by the Board of Governors of the Institute to present his paper at a meeting of the institute. If no paper submitted is deemed worthy of the prize, the award may be withheld at the discretion of the Board of Governors.

Medicine and Social Research.—Two public lectures were given in August under the auspices of the University of Chicago in conjunction with the Social Science Research Council Summer Research Training Institute in Survey Methods in Research on Health Problems conducted by the National Opinion Research Center. The first, August 9, was given by Jack Ewalt, Massachusetts Commissioner of Mental Health, on "Evaluating Mental Health Programs", and the second, August 17, by Wilson G. Smillie, executive director, State Charities Aid Association of New York, on "Future of Preventive Medicine in the United States."

John Cooper Named an Assistant Dean at Northwestern.—Dr. John A. D. Cooper has been appointed an assistant dean of Northwestern University Medical School. An associate professor of biochemistry, Dr. Cooper received his Ph.D. and M.D. degrees at Northwestern. He has been a member of the medical school faculty since 1943. Dr. Cooper is presently in Brazil to direct a course on radioisotope technics in biology and medicine. He will also make a three month lecture tour of South American universities and scientific societies. The journey is under the auspices of the U. S. State Department in connection with America's "atoms for peace" program.

Study Program to Combine Premedical and Medical Education.—The John and Mary Markle Foundation has given $75,000 to Northwestern University Medical School to finance a study of a program to combine premedical and medical education. Further support will come from a portion of a recent $300,000 grant from the Commonwealth Fund. According to Dr. Richard H. Young, dean of the medical school, the new teaching plan would

be designed to provide one continuous program of education in basic sciences, humanities and medicine. Instead of two separate, sharply divided programs of undergraduate premedical study followed by professional study of medicine in medical school, students would begin the new course on graduation from high school and finish with the degree of doctor of medicine.

The study will be conducted jointly by faculty members of the medical school, the college of liberal arts and the graduate school. Under the plan being studied, a student would enter a combined premedical and medical course on graduation from high school. The course would last seven or eight years and would present a unified progression of study in the arts and physical, biological and medical sciences from general concepts to the specialized aspects peculiar to the medical profession.

There would be no sharp break between premedical and medical education; education in all fields would continue throughout the program, during which time the students would spend about one-third of their time in each of the three general areas of arts, science and clinical medicine. At the beginning the student would be exposed to courses whose mastery is more dependent on memory. Material which requires maturity, integration and understanding would come during later years.

Ideas and methods of premedical and medical teaching now being used and the implications of recent advances in medicine in treating disease will be examined in launching the study. Other steps will be to study the facilities and personnel that would be needed, and to collect and analyze opinions, ideas and suggestions of students, doctors and faculty members throughout the country.

Committee members in charge of the project are: Moody E. Prior, dean of the graduate school, chairman; J. Lyndon Shanley, associate dean of the college of liberal arts; Irving M. Klotz, professor of chemistry in the liberal arts college; Dr. John A. D. Cooper, associate professor of biochemistry and Markle scholar in the medical school, and Dr. George Yacorzynski, associate professor of neurology and psychiatry in the medical school.

Marc Hollender Goes to Syracuse.—Dr. Marc H. Hollender, assistant professor of psychiatry at the University of Illinois College of Medicine, has accepted an appointment as professor and chairman of the department of psychiatry, State University of New York College of Medicine, Syracuse, New York. Another Chicago physician, Thomas S. Szasz, member of the staff of the Institute of Psychoanalysis, will also go to Syracuse as professor of psychiatry.

DU PAGE

New Health Officer.—Dr. Charles A. Lang became health officer for DuPage County August 1. Prior to this he served as health officer in the west district office at Maywood of the Cook County Health Department where he also served a year's residency experience, making him the first physician to occupy one of the medical public health residencies in Illinois, according to the Illinois Health Messenger. A graduate of Northwestern University Medical School, Dr. Lang also holds the Master of Public Health degree from the University of Michigan.

WARREN

Past President Norbury Gives Inspiring Talk.—F. Garm Norbury, Jacksonville, immediate Past President of the Illinois State Medical Society, addressed the Rotary Club of Monmouth, July 23, on "Mental Health." In reporting the event, Dr. Charles P. Blair, Monmouth, and Councilor of the Fourth District, said this was a clear-cut, concise and inspiring talk. Members of the Warren County Medical Society were guests of the Rotary Club.

GENERAL

Lectures Arranged Through the Educational Committee of the Illinois State Medical Society:

George M. Cummins, Jr., associate in medicine, Northwestern University Medical School, U. S. Navy Reserve Research Co. 9-1, at Navy Pier, October 9, 1956, on "Geriatrics."

Sanford A. Franzblau, clinical assistant professor of medicine, University of Illinois College of Medicine, Unity Nurses Club in Oak Park, October 24, 1956, on "Cerebral Thrombosis and Other Conditions Involving Blood Clots."

George H. Klumpner, member of the staff of the Institute for Juvenile Research, Village Woman's Club in Clarendon Hills, October 15, on "Psychiatry and Mental Health."

Lectures Arranged Through the Scientific Service Committee of the Illinois State Medical Society:

William H. Langewisch, member of the staff of Rockford Memorial Hospital, Rock Island County Medical Society, September 11, on Pediatric Problems of Interest to the General Practitioner.

Charles D. Branch, Peoria, assistant clinical professor of surgery, University of Illinois College of Medicine, Henry County Medical Society in Kewanee, September 12, on Indication for Surgical Treatment in Gastric and Duodenal Ulcers.

Benjamin Boshes, professor of neurology and psychiatry, Northwestern University Medical School, Champaign County Medical Society, October 11, in Champaign, on "Use of the Newer Tranquilizing Agents.

A. Beaumont Johnson, assistant attending neurosurgeon, Presbyterian Hospital, Iroquois County Medical Society in Watseka, October 16, on Organic Psychosis.

John A. Mart, associate in medicine, Northwestern University Medical School, Kankakee County Medical Society in Kankakee, October 16, on Recent Advances in Heart Disease.

J. Keller Mack, member of the staffs of St. John's and Memorial Hospitals, Springfield, Montgomery and Macoupin County Medical Societies in Litchfield, October 17, A Commonly Missed Chest Lesion in Children.

DEATHS

Benjamin F. Andrews*, retired, Evanston, who graduated at the College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, in 1894, died June 13, aged 92.

John W. Beare*, Chester, who graduated at the Hahnemann Medical College and Hospital in 1907, died recently, aged 75.

Martha Kirstine J. B. Blanchard, Mount Olive, who graduated at Jenner Medical College in 1910, died May 14, aged 77, of fracture of the lower end of the right femur and shock.

Raymond Samuel Brown*, Morris, who graduated at Rush Medical College in 1905, died in Newport Beach, California, April 18, aged 77. He formerly practiced in Joliet where he was a member of the staffs of St. Joseph's and Silver Cross Hospitals.

Charles A. Burkholder*, Chicago, who graduated at Rush Medical College in 1912, died July 27, aged 70. He was a member of the staff of Grant Hospital and a past president of the Central Lions Club of Chicago.

James C. Clarke*, LaGrange, who graduated at Rush Medical College in 1913, died July 12, aged 70. He had practiced medicine in LaGrange for 40 years.

Charles G. Darling, Evanston, who graduated at Northwestern University Medical School in 1903, died August 8, aged 79. He was professor emeritus of ophthalmology at the University of Illinois College of Medicine and past president and secretary of the Chicago Ophthalmological Society.

Philip Herman Dechow*, Kinderhook, who graduated at the Keokuk Medical College, College of Physicians and Surgeons, in 1906, died in Abingdon, April 2, aged 78.

Douglas C. Hurley*, Elgin, who graduated at Northwestern University Medical School in 1925, died July 15, aged 57. He was past president of the Kane County Medical Society and a veteran of both World Wars.

Konstantin V. Kirov, Chicago, who graduated at Leopold Franzens Universität Medizinische Fakultät, Innsbruck, Germany, in 1947, died in July, aged 34.

Myron E. Lollar*, Tuscola, who graduated at the University of Illinois College of Medicine in 1913, died April 4, aged 78, of pulmonary hemorrhage. He was representative in the Illinois General Assembly from the 51st district.

Carl S. Montgomery*, Stockland, who graduated at Illinois Medical College in 1903, died April 26, aged 80.

Benjamin D. Mosher, Sandwich, who graduated at Keokuk Medical College, Iowa, in 1898, died May 14, aged 81. He had practiced medicine for 50 years.

Henry Orson Munson*, Rushville, who graduated at the Hahnemann Medical College and Hospital, Chicago, in 1890, died July 14, aged 88. In 1955 he was named Illinois' "outstanding general practitioner for the year."

Karl Benedict Riegger*, Freeport, who graduated at Loyola University School of Medicine in 1919, died March 20, aged 60, of acute coronary occlusion. He was a member of the staffs of the Deaconess and St. Francis Hospitals.

Frederick Rose*, retired, Millstadt, who graduated at the St. Louis College of Physicians and Surgeons in 1892, died recently, aged 86.

Jerome L. Rosengard*, formerly of Chicago and recently of Stockton, California, who graduated at the University of Illinois College of Medicine in 1926, died December 27, 1955, aged 56.

George D. Runkle*, Stockton, who graduated at Northwestern University Medical School in 1903, died July 3, aged 77, of intestinal carcinoma.

Karl Singer*, Chicago, who graduated at Medizinische Fakultät der Universität, Wien, in 1927, died July 12, aged 54. He had been head of the department of hematology at Michael Reese Hospital since 1947.

Guy A. Sloan*, Bloomington, who graduated at the College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, in 1913, died April 24, aged 67.

Julius L. Spivack*, Chicago, who graduated at Odessa Medical Institute, Russia, in 1914, died March 30, aged 67. He was clinical associate professor at the University of Illinois College of Medicine.

Richard Perrie Still*, LaGrange Park, who graduated at the University of Illinois College of Medicine in 1950, died April 2, aged 33. He was a member of the staffs of the McNeal Memorial Hospital, Berwyn, and member and vice-president of the staff, Community Memorial Hospital in La Grange.

Gerald A. Sullivan*, Dwight, who graduated at Marquette University School of Medicine, Milwaukee, in 1917, died recently, aged 64.

John Thomas Sullivan, Sr., retired, Chicago, who graduated at the Chicago College of Medicine and Surgery in 1914, died April 15, aged 77, of cerebral thrombosis.

Alan F. Thometz*, Glenview, who graduated at Northwestern University Medical School in 1947, died August 4, aged 33. He was a member of the staff of Resurrection Hospital.

Stanley R. Veselsky, Chicago, who graduated at Dearborn Medical College, Chicago, in 1905, died December 12, 1955, aged 67, of arteriosclerotic heart disease.

Earl V. Wilcox*, retired, Flanagan, who graduated at the Chicago College of Medicine and Surgery in 1914, died recently, aged 71.

Edward C. Williams*, Downs, licensed in Illinois in 1899, died February 3, aged 81, of coronary artery disease. He was past-president of the McLean County Medical Society.

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*Member, Illinois State Medical Society

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